

China-ASEAN Sea-Rail Multimodal Logistics Project

**Financed by
The Asian Infrastructure Investment Bank**

**Environmental and Social Management Plan
(ESMP)**

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ABBREVIATIONS

AIDS	acquired immune deficiency syndrome	LMP	Labor Management Plan
AIIB	Asian Infrastructure Investment Bank	LWC	Labor and working conditions
ASEAN	Association of Southeast Asian Nations	O ₃	Ozone
BOD ₅	5-Day Biochemical Oxygen Demand	ODP	Ozone Depletion Potential
CNY	Chinese Yuan	OHS	Occupational Health and Safety
CO ₂	Carbon Dioxide	PCC	Project Coordination Committee
COD	Chemical Oxygen Demand	pH	pH Level
CSC	Construction Supervision Company	PIE	Project Implementing Entity
DEIA	Domestic Environmental Impact Assessment	PIU	Project Implementation Unit
DO	Dissolved Oxygen	PM	Particulate Matter
EEB	Ecology and Environment Bureau	PM ₁₀	Particulate Matter ≤10 μm
EHS	Environment, Health, and Safety	PM _{2.5}	Particulate Matter ≤2.5 μm
ESF	Environmental and Social Framework	PMC	Project Management Consulting
ESIA	Environmental and Social Impact Assessment	PMO	Project Management Office
ESMA	Environmental and Social Monitoring Agency	PPE	Personal protective equipment
ESMP	Environmental and Social Management Plan	PPM	Project-Affected People's Mechanism
ESMR	Environment and Social Monitoring Report	PRC	People's Republic of China
ESP	Environmental and Social Policy	QDDRDB	Qinbei District Development and Reform Bureau
ESS	Environmental and Social Standard	QDG	Qinbei District Government
EU	European Union	QHAMG	Qinzhou Huangma Asset Management Group Co., Ltd
FB	Forestry Bureau	QMDRC	Qinzhou Municipal Development and Reform Commission
GAP	Gender Action Plan	QMG	Qinzhou Municipal Government
GBV	Gender-Based Violence	RP	Resettlement Plan
GRM	Grievance Redress Mechanism	SEA/SH	Sexual Exploitation and Abuse/Sexual Harassment
GWP	Global Warming Potential	SEP	Stakeholder Engagement Plan
GZARG	Guangxi Zhuang Autonomous Region Government	SO ₂	Sulfur Dioxide
HIV	human immunodeficiency virus	SSRA	Social Stability Risk Assessment
L _{Aeq}	equivalent continuous A-weighted sound pressure level	STIs	Sexually transmitted infections
LIEC	Loan Implementation Environmental Consultant	TSP	Total Suspended Particulates
LISC	Loan Implementation Social Consultant	WRB	Water Resource Bureau

WEIGHTS AND MEASURES

cm	Centimeter
dB(A)	A-weighted Sound Level, measured in decibels
Ha	hectare
kg	Kilogram
km	Kilometer
kWh	Kilowatt-hour
m	Meter
m/s	Meters per Second
m ²	Square Meter
m ³	Cubic Meter
mg/l	Milligrams per Liter
mg/m ³	Milligrams per Cubic Meter
mu	Chinese Unit of Land Area (Mu)
µg/m ³	Micrograms per Cubic Meter
°C	Degrees Celsius
t/h	Ton per Hour

NOTE:

"\$" REPRESENTS US DOLLARS IN THIS REPORT

1 HECTARE (ha) = 15 mu.

1 US DOLLAR = 7.0000 CHINESE YUAN.

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I. Objective

1. This Environmental and Social Management Plan (ESMP) is prepared for the China-ASEAN Sea-Rail Multimodal Logistics Project in Qinzhou (hereinafter referred to as "the Project"). The ESMP must be implemented in all phases of the project, including design, pre-construction, construction, and operation. The ESMP aims to ensure that the project complies with China's environmental and social laws and regulations and the Asian Infrastructure Investment Bank's (AIIB) Environmental and Social Framework (ESF). The ESMP outlines the roles and responsibilities of all project entities during implementation; anticipated impacts and mitigation measures; inspection, monitoring, and reporting arrangements; training and institutional strengthening; the Grievance Redress Mechanism (GRM); and future public consultations.

2. During the design phase, the Project Management Office (PMO) will issue the ESMP to the design institute for incorporating the mitigation measures into the detailed project design. If there are major changes in the design, the PMO must first notify AIIB of the changes and consult with AIIB. If the AIIB approves the changes, the Project Implementation Unit (PIU) shall revise the Environmental and Social Impact Assessment (ESIA) and ESMP, and submit them to the relevant local government authorities and AIIB for their approval and subsequent disclosure.

3. To ensure that bidders comply with the provisions of the ESMP, the PMO will prepare and provide specification clauses to be included in the tendering documents, specifically including: (i) Bidders shall clearly itemize and fully budget environmental and social management-related costs in their bid proposals, along with corresponding management requirements; (ii) Explicitly incorporate environmental and social management responsibilities, performance standards, monitoring mechanisms, and penalties contractual breaches into the contract terms and conditions; and (iii) The current effective version of the ESMP.

II. Institutions Responsible for Implementing ESMP and Their Responsibilities

4. **Project Coordination Committee (PCC).** The People's Government of the Guangxi Zhuang Autonomous Region (GZARG) has decided that the Project Coordination Committee (PCC) is composed of the Steering Committee of the Qinzhou Municipal Government (QMG) led by a Vice Municipal Mayor, and the Steering Committee of the Qinbei District Government (QDG) led by a Vice District Mayor. The PCC is designed to perform high-level coordination functions, focusing on resolving cross-jurisdictional collaboration challenges at both municipal and district levels.

5. **Project Management Office (PMO).** Under the Project Coordination Committee, the Project Management Office (PMO) will be established. The People's Government of Guangxi Zhuang Autonomous Region (GZARG) has determined that the PMO will be jointly formed by the Project Management Office of Qinzhou Municipal Development and Reform Commission (QMDRC), led by its Director General, and the Project Management Office of Qinbei District Development and Reform Bureau (QDDRB), led by its Director. The purpose of the PMO is to centralize the management and coordination of the project's preparation, implementation, monitoring, and evaluation. The PMO will consist of representatives from the city-level government, development and reform commission, finance bureau, natural resources bureau, ecology and environment bureau, district-level government, development and reform bureau, finance bureau, natural resources bureau, transportation bureau, water conservancy bureau, forestry bureau, ecology and environment bureau, land and housing expropriation center, and other relevant departments. The PMO will be primarily responsible for coordinating the ESMP and shall designate at least one Environmental and Social Focal Person to coordinate environmental and social matters during the Project implementation.

6. **Project Implementation Unit (PIU).** The People's Government of the Guangxi Zhuang Autonomous Region (GZARG) has designated that the Qinzhou Huangma Asset Management Group Co., Ltd. (QHAMG) as the PIU, responsible for developing, constructing, owning, and operating the Project. This includes managing procurement and contracts, overseeing the work of technical consultants, procurement agents, and construction supervision companies. The PIU shall designate at least one Environmental Specialist and one Social Specialist to coordinate E&S matters during the project implementation.

7. **Project Implementation Entity (PIE).** According to AIB's definition of Project

Implementation Entity (PIE), this project will have four implementation entities: the People's Government of the Guangxi Zhuang Autonomous Region (GZARG), Qinzhou Municipality Government (QMG), Qinbei District Government (QDG), and Qinzhou Huangma Asset Management Group Co., Ltd (QHAMG).

8. **Loan Implementation Environment Consultant (LIEC) and Loan Implementation Social Consultant (LISC).** The PIU, Qinzhou Huangma Asset Management Group Co., Ltd. (QHAMG), will procure Project Management Consultant (PMC) services. The consultancy service includes recruiting Loan Implementation Environmental Consultant (LIEC) and Loan Implementation Social Consultant (LISC), providing advisory services to the PMO, QHAMG/PIU, and contractors on all aspects of environmental and social management, supervision, and monitoring of the Project.

9. **Contractors and Construction Supervision Company (CSC).** Under the supervision of the Construction Supervision Company (CSC), the PMO, and the PIU, the contractors will be responsible for implementing the relevant mitigation measures of ESMP during construction. Contractors shall develop contract-specific ESMPs for their contracted works, aligned with the overarching Project ESMP, incorporating specific contractor responsibilities as outlined in Table 1. The CSCs will be selected by the PIU through the Chinese bidding procedure and shall oversee the construction progress and quality, as well as the implementation of ESMP on construction sites. Each CSC should assign an E&S officer.

10. **External Environment and Social Monitoring Agency (ESMA).** The AIIB requires independent external environmental and social monitoring for "Category A" projects. External environmental and social monitoring will be carried out by qualified or experienced monitoring agencies selected through an open bidding process. The ESMA shall conduct regular environmental and social monitoring during both construction and operation phases, in accordance with the ESMP (Tables 5 and 6). The monitoring results shall be submitted to the PMO, PIU, and AIIB.

11. The table below outlines the institutional arrangements and responsibilities for ESMP implementation.

Table 1: Implementation Arrangements and Responsibilities of the Environmental and Social Management Plan

Organization	Roles and Responsibilities
Project Coordination Committee (PCC)	<p>Ensure timely coordination and support from national, regional, and other relevant institutions.;</p> <p>Provide strategic-level support to the PMO and provide guidance on major issues during implementation;</p> <p>Ensure timely and effective implementation of loan agreements;</p> <p>Coordinates with AIIB.</p>
Project Management Office (PMO)	<p>Supervise and manage project implementation, and oversee quality assurance.</p> <p>Coordinate with AIIB on all aspects of project implementation.</p> <p>Handle routine management operations during project preparation and implementation.</p> <p>Designate at least one environmental and social focal person.</p> <p>Establish a Grievance Redress Mechanism(GRM).</p> <p>Coordinate with the AIIB on project progress and E&S monitoring reports and submit these reports to AIIB for disclosure.</p> <p>Update the ESIA report, RP and the ESMP as required, and submit the updated drafts to AIIB for approval.</p> <p>Disclose the E&S instruments and monitoring reports on the government website.</p>
Project Implementation Unit (PIU)	<p>Responsible for project implementation under the leadership of the PMO;</p> <p>Procure and manage design institutes, procurement agents, contractors, and supervision units in compliance with both government and AIIB regulations.</p> <p>Procure PMC services, including LIEC and LISC.</p> <p>Submit tender documents, bid evaluation reports, and other required documents to AIIB for review.</p> <p>Incorporate the ESMP into the bidding documents.</p> <p>Designate at least one environmental specialist and one social specialist.</p> <p>Supervise and monitor the implementation of the ESMP.</p> <p>Participate in capacity building and training activities.</p> <p>Be responsible for construction supervision and quality control.</p> <p>Engage external ESMA for environmental and social monitoring.</p> <p>Manage the operation and maintenance of completed project facilities, including all E&S management, monitoring, and reporting</p>

	<p>responsibilities.</p> <p>Provide support for updates to the ESIA, report, RP and the ESMP as required.</p> <p>Disclose E&S monitoring reports on the official website of the Qinbei District Government and the official WeChat account of Qinzhou Huangma Asset Management Group Co., Ltd. (QHAMG).</p> <p>Conduct regular stakeholders' consultation and meetings to address issues and concerns related to environment and social</p>
<p>Loan Implementation Environmental Consultant (LIEC) and Loan Implementation Social Consultant (LISC).</p>	<p>Assist in updating the ESIA report, RP and the ESMP as required.</p> <p>Supervise the implementation of mitigation measures specified in the ESMP.</p> <p>On behalf of the PMO, prepare monitoring and progress reports for the ESMP in English and submit them to AIIB.</p> <p>Provide training to the PMO, PIU, and engineering contractors according to the training plan outlined in Table 3, covering topics such as China's E&S laws, regulations, and policies, AIIB's ESF, ESMP implementation, the GRM and the PPM.</p> <p>Identify any E&S implementation issues and propose necessary corrective actions.</p> <p>Conduct ESMP inspections as required.</p>
<p>External Environmental and Social Monitoring Agency (ESMA)</p>	<p>The PIU, Qinzhou Huangma Asset Management Group Co., Ltd. (QHAMG), will engage at least one qualified third-party ESMA to conduct independent monitoring of the E&S performance indicators specified in Tables 5 and 6..</p> <p>Verify the Project's compliance with the standards</p> <p>Submit the monitoring reports to Qinzhou Huangma Asset Management Group Co., Ltd. (PIU), PMO, and AIIB.</p>
<p>Construction Contractors</p>	<ol style="list-style-type: none"> 1. Designate a dedicated responsible person to oversee the implementation of the ESMP within their contractual scope, handling daily communication and coordination with relevant stakeholders to ensure effective implementation of all measures. 2. Implement E&S mitigation measures: In accordance with the ESMP requirements, strictly implement all E&S impact mitigation measures during the project's preparation, construction, and operational phases. This includes, but is not limited to, waste management, noise control, dust suppression, soil and water conservation, ecological protection, safe construction practices, social risk prevention and control, and emergency response. 3. Ensure gender equality and social inclusion: Strictly enforce the Gender Action Plan (GAP), actively support women's participation in the project, female workers' rights, and prevent gender-based violence, discrimination, sexual discrimination, and sexual harassment.

	<p>4. Facilitate information disclosure and public engagement: Cooperate with the project management unit in information disclosure efforts. Support and participate in public engagement and information feedback activities within communities along the project route, promptly addressing environment and social concerns.</p> <p>5. Establish an effective GRM. The Contractor shall establish a functional GRM for both project workers and project-affected people, ensuring all stakeholders have unobstructed channels to voice opinions and concerns, which are then processed, responded to, and documented promptly as required..</p> <p>6. Conduct staff training and capacity building: Contractors shall provide regular training for construction personnel on work safety, public health safety, transportation safety, construction management, gender equality, and other relevant topics to enhance worker awareness and capabilities, ensuring the effective implementation of all management measures..</p> <p>7. Monitoring and reporting: Cooperate with the ESMA and PMO in monitoring E&S impacts. Provide required data and reports and promptly address and report any identified issues</p> <p>8. Cooperate with supervision and management: Accept supervision and management from the PMO, ESMA, PIU, and relevant government departments. Actively cooperate with all inspections and implement necessary corrective actions.</p> <p>The above clauses can be incorporated into the bidding documents as ESMP implementation requirements to ensure clear contractor responsibilities, executable measures, and minimizes the E&S impacts during construction..</p>
Construction Supervision Company (CSC)	<p>Ensure the availability of adequate funding and human resources to supervise and instruct contractors in the appropriate and timely implementation of the required mitigation and monitoring measures specified in the ESMP;</p> <p>Monitor/oversee construction progress and quality;</p> <p>Appoint qualified occupational health and safety (OHS) personnel to conduct regular on-site supervision of contractors; Monitor the contractor's performance in implementing the ESMP;</p> <p>Use basic hand-held instruments to perform simple and cost-effective quantitative on-site measurements;</p> <p>Conduct regular inspections to verify that construction activities comply with project environmental monitoring standards and targets, especially noise and air quality;</p> <p>Supports environmental and social monitoring reports.</p>
Township/Street, Community/Village Committee	<p>Township/Street: Participate in the investigation and confirmation of the ownership, land type, area, and other status of the affected land in the project, as well as the investigation and confirmation of the ownership, type, quantity, and other status of the</p>

	<p>attached objects and green seedlings on the ground; Participate in the formulation of resettlement pathways and site selection for farmers affected by land acquisition and demolition; Organize public participation to promote laws and policies related to land acquisition compensation, and resettlement; Approve and supervise the distribution and expenditure of land compensation funds for subordinate village committees; Coordinate the relationship between the project construction unit, affected villages/communities, and affected families, and resolve conflicts and issues during negotiations.</p> <p>Community/Village Committee: Participate in the investigation and confirmation of the ownership, land type, area, and other status of the affected land in the project, as well as the investigation and confirmation of the ownership, type, quantity, and other status of the attached objects and green seedlings on the ground; Organize village representative meetings or village meetings, According to relevant laws and regulations, propose specific social security personnel among the farmers whose land has been requisitioned, and report to the town government for filing; Organize public consultations and promote policies on land acquisition, demolition, compensation, and resettlement ; Participate in relevant resettlement work; Report the progress of resettlement implementation to the town government; Pay the compensation fees for collective land acquisition to farmers according to the compensation and resettlement plan, and post and publicize the income and expenditure status; Report the opinions and suggestions on land acquisition compensation and resettlement plans to relevant higher-level departments.</p>
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III. Environmental and Social Management Plan

12. The ESMP is a management instrument developed for the China-ASEAN Sea-Rail Multimodal Logistics Project to address potential environmental and social impacts. It details mitigation measures for these impacts across project stages, including design, pre-construction, construction, and operation. Table 2 lists major potential impacts and recommended mitigation measures for each stage. These mitigation measures will be incorporated into the detailed design, bidding documents, construction contracts, and operational management manuals by the design institute (during the detailed design phase) and contractors (during the construction phase), under the supervision of the CSCs and PIU. The implementation status and effectiveness of these measures will be assessed through ongoing environmental and social monitoring to identify necessary improvements or adjustments, ensuring effective mitigation of E&S risks throughout Project implementation.

13. In accordance with the requirements of the Asian Infrastructure Investment Bank's (AIIB) Environmental and Social Framework (ESF) and Environmental and Social Standard 1 (ESS1) on social and gender inclusion, as well as relevant Chinese laws and regulations, a gender equality and social inclusion perspective has been systematically integrated into all stages of project design and implementation. A Gender Action Plan (GAP) was prepared and will be implemented as a key component of the project's environmental and social management. Refer to Appendix 5. This is to ensure women enjoy equal status and opportunities throughout the project cycle, thereby achieving the goals of gender equality and women's empowerment.

14. In accordance with the requirements of the Asian Infrastructure Investment Bank (AIIB) Environmental and Social Framework (ESF) and its Environmental and Social Standard 3: Indigenous Peoples (ESS3), as well as relevant Chinese laws and regulations, to ensure the full protection of the legitimate rights and interests of the Zhuang ethnic minority groups in the project area, the project has systematically identified the distribution characteristics and potential impacts on ethnic minorities during the preparation phase. Based on this, a culturally appropriate, gender-sensitive, feasible, and inclusive ethnic minority development measures table has been developed (see Appendix 6 for details). This table will be implemented as a key component of the project's environmental and social management to ensure that Zhuang residents and women derive substantial, equitable, and inclusive benefits throughout the entire project cycle.

15. The development of the ESMP strictly adhered to the requirements of the AIIB ESF, encompassing the following key phases. In May 2024, systematic baseline data collection

and environmental and social context review were conducted. integrated with site investigations, stakeholder consultations, and public disclosure. This process identified preliminary environmental and social impacts and facilitated a detailed analysis of potential risks across all Project phases. Concerns and recommendations from residents in environmentally sensitive areas, persons displaced by the Project, women, and ethnic minorities were incorporated into the mitigation and management measures. The draft ESMP was finalized in July 2024. In August 2024, environmental and social impact information was disclosed to the public on bulletin boards in communities/village committees at the project location. This ensured that project-affected people were well-informed and could exercise their rights to participation in environmental and social risk management.

16. Following field surveys, E&S consultants conducted continuous assessments and facilitated stakeholder engagement. Through structured communication with the PMO and PIU, the E&S consultants verified risk mitigation measures, optimized project plan, finalized implementation schedules, and enhanced environmental and social impact evaluations and management measures.

- October 2024: An online meeting was organized to discuss the relocation of the Tudimiao in Hengling Village.
- March–April 2025: Meetings were organized to discuss land acquisition compensation, support measures for vulnerable groups, and social security arrangements.
- July 2025: A technical review session verified the Project's area of influence and physical asset inventory, and discussed revisions to asset inventory lists, land use indicators, compensation standards, Resettlement Plan (RP), and implementation schedules in detail.
- September 15–16, 2025: Due diligence on OHS and labor management practices was conducted with local photovoltaic and construction enterprises.
- September 23, 2025: An AIIB mission team, accompanied by the PMO, PIU, E&S consultants, and local government representatives, conducted a field visit. They interviewed villagers potentially affected by railway noise and vibration, inspected the current and proposed relocation site of the Hengling Village Tudimiao and the resettlement housing complex, and discussed resettlement arrangements, housing construction, and the relocation arrangements.

17. The engagement of stakeholders, including village and community leaders, resident representatives, and relevant administrative departments, validated the mitigation measures and institutional arrangements specified in the ESMP through structured consultations. The ESMP was finalized after incorporating stakeholder feedback, with technical support from the PMO and PIU, to ensure its practical effectiveness and technical soundness. Through continuous information disclosure, public participation, and feedback mechanism, the Project effectively addressed stakeholder concerns. This process ensures the ESMP is regularly updated, transparently disclosed, and adaptively managed, enhancing the project's regulatory compliance, social acceptance, and long-term sustainability.

18. In February 2026, in response to feedback from AIIB consulting experts, the project environmental and social consultant updated the Environmental and Social Impact Assessment (ESIA) report, the Environmental and Social Management Plan (ESMP), the Stakeholder Engagement Plan (SEP), the Gender Action Plan, and the Resettlement Plan (RP).

Table 2: Environmental and Social Impact Mitigation Measures

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance	Implementation unit	Supervisory institution
Design Phase						
Environmental	Greenhouse Effect		The refrigerant uses environmentally friendly refrigerants, and the selected refrigerant for the unit has an Ozone Depletion Potential (ODP) of 0 and a Global Warming Potential (GWP) of less than 150. The currently selected refrigerant type is NH3+CO ₂ cascade system. If the refrigerant type is updated, a type with an ODP of 0 and a low GWP will be selected.	Complies with domestic and EU standards	PIU	AIIB
	Solar PV Impact		The design utilizes monocrystalline silicon solar panels. These panels employ low-iron tempered glass with a transmittance of approximately 93%-94.5% and a reflectivity controlled below 8%. The surface of monocrystalline silicon modules typically features matte or textured treatments, resulting primarily in diffuse reflection, which scatters reflected light energy and reduces interference caused by localized light intensity concentration. The photovoltaic modules are installed facing south at a 15° tilt angle, optimized for Qinzhou's solar exposure. This configuration directs reflected light to scatter upward rather than directly toward ground-level sensitive areas such as residential buildings or roads, thus avoiding significant light pollution. Regular cleaning removes dust, bird droppings, and other contaminants from the panel surfaces to prevent the "localized mirror effect" that could intensify reflections. If nearby residents report glare disturbances, on-site inspections are conducted promptly to adjust the panel angles or install simple shading measures (e.g., adding light-blocking strips along the edges).	/	PIU	AIIB
	Biodiversity		(1)It is recommended that the roadside slopes be protected using a multi-layered greening	/	PIU	AIIB

		<p>approach consisting of trees, shrubs, grasses, and vines as much as possible.</p> <p>(2)Local herbaceous plants should be planted under bridges and culverts to create wildlife corridors, reducing the barrier effect of the proposed road on wildlife.</p> <p>(3)The project's landscaping should prohibit the use of invasive alien species listed by the government. Fast-growing and deciduous tree species should not be used. Native and common species should be prioritized. The variety of plant species should be as rich as possible, using a mixed-species approach to avoid large-scale monoculture planting, thereby improving resistance to the invasion of alien species.</p> <p>(4)For road embankment sections, culverts or bridges should be added as much as possible to mitigate the road's barrier effect, and the ends of the culverts should be designed with gentle slopes to facilitate the migration of amphibians and reptiles.</p>			
Construction Preparation Phase					
Environmental and Social	Institutional Strengthening	<p>(1) At least one month before construction, it shall be confirmed that the PMO appoint at least one full-time and qualified E&S focal person. The PIU need to appoint at least one full-time environmental focal person and one full-time social focal person. The E&S focal persons will be responsible for coordinating the implementation of the ESMP.</p> <p>(2) At least one month before construction commencement, it shall be confirmed that the project has contractually engaged: 1 certified or experienced external environmental and social monitoring agency to conduct external environmental and social monitoring.</p> <p>(3) At least one month before construction, confirm that the project has recruited consulting services (PMC), which should include hiring environmental and social consultants for loan execution.</p> <p>(4) Prior to construction, organize and implement training on the project's ESMP for the PMO office, QHAMG/PIU, contractors, and CSC staff.</p>	/	PMO,PIU	AiIB
	Bidding	Include E&S management measures in bidding documents and contracts for construction and installation. All contractors must strictly implement the management plan.	Management plan included in		AiIB

				bidding documents and contracts		
	Establish GRM		Establish a GRM for project-affected people and workers prior to construction, with designated personnel. Provide relevant training for the person in charge. Contact information will be publicly disclosed. The contact information of the project complaint mechanism contact person, including phone number, address, and email, as well as AIIB's PPM, will be publicly disclosed to the public.	/		AIIB
			The AIIB has established a Project-Affected People's Mechanism (PPM). This mechanism provides an independent and impartial review opportunity for project-affected people who believes that AIIB's failure to implement its Environmental and Social Policy (ESP) has caused, or may cause, adverse impacts on them, and whose concerns remain unresolved through project-level or AIIB management channels. PPM-related information is accessible at: https://www.aiib.org/en/about-aiib/who-we-are/project-affected-peoples-mechanism/how-we-assist-you/index.html	/	AIIB	
Construction Phase						
Environmental	Ecology	Soil and Water Conservation	(1)All sand and gravel materials will be purchased from external suppliers. During construction, the contractor should ensure that the sand and gravel suppliers have the proper mining permits, and the contracts for purchasing these materials should specify the responsibilities for soil and water conservation. No spoil or waste material disposal sites will be set up. (2)Before construction, the topsoil should be stripped and transported to a temporary stockpile site for centralized storage. Temporary barriers, drainage, and sedimentation measures should be installed around the stockpile area. (3)Considering the long construction period, temporary grass seed broadcasting and	/	Construction Contractor	AIIB, P MO, PI U, EEB , WRB, CSC, E SMA

		<p>protective covering measures should also be applied in the topsoil storage area.</p> <p>(4)During construction, temporary drainage, sedimentation, and covering measures should be implemented. Water diversion ditches should be placed on the slopes. After construction is completed, topsoil should be restored, and slope protection should be implemented with grass turf.</p> <p>(5)The central median or side strips of the roadbed should be restored with topsoil and planted with trees, shrubs, and grass, followed by maintenance and nurturing.</p> <p>(6)Drainage pipes should be laid under the road, permeable bricks should be used for sidewalks, and grass paving bricks should be used in parking lots.</p> <p>During underground construction, water diversion measures using woven bags filled with soil should be implemented.</p> <p>(7)Signboards and warning signs: Water and soil conservation publicity boards and warning signs should be placed at the entrances and exits of the construction site.</p>			
	Biodiversity	<p>(1)If protected plants, such as the Cibotium barometz, are discovered at the construction site, the project management department should be consulted for protection measures. If there are numerous trees at the construction site, and ancient trees over 100 years old or trees marked for protection by local forestry departments are found during construction, the project management department should be consulted for their protection. Protected plants should be transplanted to a similar environment. Prior to transplantation, the reproductive methods of the species should be investigated, and reproduction methods should be established in advance to ensure successful transplantation.</p> <p>(2)Among the trees that need to be felled, priority should be given to transplanting protected tree species, followed by transplanting younger trees.</p> <p>It is strictly prohibited to fell trees outside the land-use area. Forestry fire prevention education should be strengthened, and fire warning signs should be placed around the construction area. Emergency measures for forest fire control should also be prepared.</p>	/	Construction Contractor	<p>AIIB,P MO,PI U,EEB WRB, FB,CS C,ES MA</p>

		<p>(3)Permanent and temporary land occupation areas should retain arable soil or topsoil to provide good soil for vegetation. The topsoil from permanently or temporarily occupied farmland, forest land, etc., should be collected and preserved for later re-cultivation and vegetation restoration.</p> <p>(4)Excavation for various pipelines should avoid rainy days. The excavation width of the pipeline trench should follow design specifications, and temporary soil piles at the trench sides should be covered. After pipeline installation, backfilling should be carried out according to relevant standards, and vegetation should be restored after construction.</p> <p>(5)For compensatory measures for permanent occupation of forest land, the principle of local and nearby restoration should be followed. Restoration sites should fully utilize forest clearings, existing suitable forest land, and barren hills and slopes. The number of trees restored should be no less than the area of the occupied forest land. Vegetation restoration should be carried out under the guidance of local forestry departments.</p> <p>(6)The selection of tree species for landscaping should consider local climate conditions and native species, with an emphasis on consistency with surrounding vegetation. Tree species such as Qingtan, Soybean trees, and Ren-dou should be considered, as well as shrubs like Gray-furred Tree of Heaven and Tiger Thorn, and herbaceous plants like Five-segmented Reed, Bamboo-leaf grass, and Common Reed. The use of alien invasive species listed by China, such as Bidens and Parthenium, is strictly prohibited.</p> <p>(7)Landscaping should be completed as quickly as possible to avoid prolonged exposure, which may provide opportunities for the invasion of alien species. The landscape design should follow the structure of trees, shrubs, and grasses, with a diverse range of species to avoid large-scale monoculture plantations. The goal is to improve resistance to the invasion of alien species.</p> <p>Publicize wildlife protection regulations and raise construction personnel's awareness of conservation. Hunting of wild animals is strictly prohibited.</p>			
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			<p>(8)Efforts should be made to minimize disturbance from mechanical noise to nearby protected bird species and regulate construction behavior. (9)Construction personnel are prohibited from hunting. Wild birds are mostly active at dawn, dusk, or nighttime, with midday being their rest time. Breeding periods for birds and fish are generally from April to July. Construction methods should be controlled to avoid disturbing wildlife during their activity and breeding periods.</p> <p>(10)Efforts should be made to avoid using high-noise machinery during the evening and night to prevent light and noise from adversely affecting mammals.</p>			
	Air Quality	Construction Dust	<p>(1)A progressive phased construction method should be adopted, with the length of excavation operations not exceeding 1,000 meters at one time, minimizing the area of earthworks and exposed ground.</p> <p>(2)Exposed ground (including earthworks) should be covered. More than 80% of the area of each exposed surface should be covered, and the coverage effectiveness must be at least 90%. The coverage measures include steel plates, dust nets (or cloth), greening, or other equally effective coverage methods.</p> <p>(3)Construction enclosures around villages and residential areas should have a height of no less than 2.5 meters. In other areas, the enclosures should be at least 1.8 meters high. The bottom of the enclosures should have a protective base at least 20 cm high to prevent dust from spilling out. The enclosures must be made of hard materials such as metal, concrete, or plastic. No gaps larger than 0.5 cm should exist between two adjoining enclosure panels or between the enclosure and the protective base. The enclosures must not have significant holes or damage.</p> <p>(4)Dust-prone materials should be covered. All dust-generating materials such as sand, gravel, lime, and mortar must be completely covered with waterproof dust cloths or placed in enclosed areas with cover on the top and sides. The dust cloths or enclosures must be in good condition, with a coverage effectiveness of over 95%. This does not apply to small</p>	Intergrated Emission Standard of Air Pollutants (GB 16297-1996)	Construction Contractor	AIIB,P IU,EE B, CSC,E SMA

		<p>amounts of material used within 8 hours.</p> <p>(5)The construction site should designate a person responsible for cleaning, with watering equipment provided for regular dust suppression and cleaning.</p> <p>(6)The main roads, processing areas, and living and office areas on the construction site should be hardened. Roads used for vehicle traffic should be paved with concrete to meet vehicle safety requirements and should be free of damage. At all times, there should be no visible dust on the traffic roads. Watering measures must be taken when cleaning roads.</p> <p>(7)A vehicle washing facility should be installed. A designated person should be responsible for washing and cleaning to ensure that vehicles do not carry mud out of the site. Before vehicles leave the site, wheels, bodies, and cargo compartments should be cleaned or washed to ensure vehicles are clean before hitting the road. Vehicles transporting earth, waste, or other dust-generating materials should be sealed or covered.</p> <p>(8)When loading and unloading construction waste or dust-prone construction materials, spraying water, using wet operations, covering, or other dust suppression methods should be implemented to effectively control dust emissions.</p>			
	Construct ion exhaust	<p>(1)Strengthen the control of air pollution from construction machinery by using non-road mobile machinery that is registered with information codes in Qinzhou City and meets emission standards. The use of high-emission non-road mobile machinery is strictly prohibited. The use of construction machinery that emits black smoke and has high emissions (including excavators, loaders, graders, pavers, rollers, forklifts, etc.) is prohibited at all construction sites. Priority should be given to using non-road mobile machinery that meets the Stage IV emission standards in China's "Emission Limits for Exhaust Pollutants from Diesel Engines of Non-Road Mobile Machinery" or new energy non-road mobile machinery.</p> <p>(2)Sign disposal contracts or direct-use agreements with transportation and construction waste disposal units, ensuring that qualified transportation units are used for the</p>		Construction Contractor	AIIB,P IU,EE B, CSC,E SMA

			transportation of construction waste, earth, sand, and gravel. Closed transportation should be implemented.			
	Sound Environment	Construction Noise	<p>(1) Special attention will be given to the six natural villages, one community, and one kindergarten (total population: 1,865 people) within a 200-meter radius of the construction site. This will include:(a) Consulting with community representatives before the commencement of any work to clarify the exact project start date and schedule, the nature of the project, equipment used, safety measures, and public access routes around the site during construction;(b) Installing sound barriers to minimize emissions as much as possible;(c) Agreeing on the daily working hours for the project.</p> <p>(2)Construction should be prohibited during the hours of 22:00–06:00.</p> <p>(3)Use low-noise machinery or equip machinery with soundproofing devices. Ensure that regular repairs and maintenance are conducted to keep the equipment in good working condition and minimize noise.</p> <p>(4)Install temporary soundproof barriers or enclosures around noisy equipment to isolate the noise.</p> <p>(5)When working near noisy equipment (e.g., piling), provide construction workers with appropriate hearing protection (earmuffs).</p> <p>(6)Horns should not be used unless absolutely necessary, and whistles should be used as sparingly as possible.</p> <p>(7)High-noise activities (e.g., crushing, concrete mixing) should be carried out at least 1 kilometer away from sensitive locations.</p> <p>(8)Special care should be taken when construction sites are near schools or other sensitive locations. If construction activities are unavoidable during school terms, the use of heavy machinery should be limited to weekends and non-school hours.</p> <p>(9)Regularly monitor noise levels in areas that are sensitive to disturbances. If noise exceeds standards, check the equipment and construction conditions, and take mitigation</p>	Emission Standard of Environmental Noise for boundary of Construction Site (GB12523-2011)	Construction Contractor	AIIB,P IU,EE B, CSC,E SMA

		<p>measures to correct the situation.</p> <p>(10)Conduct regular face-to-face interviews with residents near the project to identify noise disturbances. Community feedback will be used to adjust the working hours of noisy machinery.</p> <p>(11)Consult with local residents to develop a construction plan, scheduling activities that are most likely to generate noise and vibration during the day to minimize disruption. Trash bins will be set up at the construction site for waste collection, and local sanitation departments will regularly collect and dispose of it.</p> <p>(12)Use noise control devices, such as temporary soundproof barriers or enclosures during impact or crushing activities, and install mufflers on internal combustion engines.</p> <p>(13)Avoid or minimize transportation of materials through community areas.</p>			
Water Environment	Construction Wastewater	<p>(1)Settle construction wastewater in sedimentation ponds. After treatment, the wastewater can be reused for dust suppression on-site, as well as for cleaning machinery and vehicles. The solid waste in the sedimentation pond, once dried, can be used as backfill material.</p> <p>(2)Cover the topsoil stockpiles, material storage areas, and other such sites. Install drainage ditches around the sites, and set up sedimentation tanks in low-lying areas. Surface runoff should be treated through sedimentation before being reused. Any wastewater that cannot be reused should be discharged into the municipal sewage system only after approval from the relevant authorities. Discharging wastewater containing a significant amount of mud or untreated wastewater into the municipal sewer system or water bodies is strictly prohibited.</p> <p>(3)Fuel, engine oil, and other hazardous substances should be stored in safe areas with impermeable surfaces and equipped with oil absorption and cleaning facilities.</p> <p>(4)The project will not set up a construction camp. Workers will rent nearby residential houses. Sufficient toilets will be provided near the construction site, and domestic wastewater will be treated in septic tanks and regularly transported to the sewage treatment</p>	/	Construction Contractor	AIIB,P IU,EE B, CSC,E SMA

		<p>plant.</p> <p>(5)The arbitrary disposal of construction waste into rivers is strictly prohibited. During culvert construction, machinery must be well-maintained to avoid malfunctions such as leaks or spills. If a malfunction occurs, the equipment should be prohibited from use; if a malfunction occurs during use, the equipment should immediately return to the shore for repair. For machinery that cannot be moved, if leakage is detected, containers should be used to collect the waste, which should then be transported back to the shore for proper handling.</p>			
Solid Waste	Household Waste	Set up garbage bins at construction sites, collected by local sanitation departments.	Regular collection	Construction Contractor	AIIB,P IU,EE B, CSC,E SMA
	Construction Waste	The construction unit must comply with the relevant provisions of the Construction Waste Management Regulations, recycle usable materials, and entrust the disposal of unusable materials to a qualified construction waste transportation unit for delivery to the Construction Waste Disposal Site.	Qinzhou City Urban Construction Waste Management Regulations	Construction Contractor	
	Hazardous Waste	Formulate a hazardous waste management plan. Set up a temporary hazardous waste storage area at the construction site to classify and store hazardous waste, and entrust a qualified third-party company with the transportation and proper disposal of hazardous waste."	The storage area should meet the requirements of the " Standard for Pollution Control on Hazardous Waste Storage " (GB 18597-2023). The	/	

				entrusted disposal units must have the appropriate hazardous waste disposal qualifications.		
		Waste Soil and Rock	After comprehensive utilization of earth and stone materials in the project, no waste materials will be generated.	/	/	
	Occupational Health and Safety (OHS)		<p>(1) Compliance with domestic OHS regulations: Adhere to relevant standards such as the General Specifications for Safety, Hygiene, and Occupational Health on Construction and Municipal Construction Sites, comply with the Occupational Exposure Limits for Hazardous Factors in the Workplace, the Directory of Occupational Diseases, the Catalogue of Occupational Hazard Factors, and the Environmental and Hygiene Standards for Construction Sites. Establish a regular monitoring system for occupational diseases and health hazards.</p> <p>(2) Establish a sound construction supervision and management system: Set up construction safety supervisors on-site.</p> <p>(3) Regular OHS training for workers: Organize training on occupational health and safety and emergency response regularly. Develop emergency preparedness and response plans for accidents and emergencies, clearly outlining reporting procedures. This includes environmental and public health emergencies related to hazardous material leaks and similar incidents. Establish an emergency hotline with the Qinbei District People's Hospital of Qinzhou City, where the project area is located.</p> <p>(4) Construction site hygiene:(a) Provide the site with clean and sufficient fresh water;(b)</p>	/	Construction Contractor	AIB, PIU, CSC,E SMA

		<p>Each contractor should provide good sanitary conditions, adequate toilet facilities, and waste management with classification;(c) Effectively clean and disinfect the site. During land leveling, spray phenolic water for disinfection. Disinfect toilets and trash bins, ensuring regular cleaning of solid waste;(d) Conduct rodent control activities at least once every three months and mosquito and fly control activities at least twice a year;(e) In accordance with labor management and health department requirements, provide public toilets in the construction site living area (if any), and hire dedicated personnel for cleaning and disinfection;(f) Discharge construction site wastewater into the municipal sewage system or use mobile systems for on-site treatment.</p> <p>(5) Occupational safety:(a) Provide all construction workers with personal protective equipment (PPE) that meets Chinese national standards (safety helmets and shoes, high-visibility vests, and safety harnesses for working at height), and strictly require all workers to wear PPE;(b) Provide goggles, gloves, and respiratory masks for workers doing interior decoration work;(c) Provide earplugs for workers operating machinery or working near machinery.</p> <p>(6) Disease prevention and health services: The following disease prevention measures and health services should be implemented:(a) Construction workers should undergo a medical examination before starting work on-site. If any infectious diseases are found, the affected individuals must be immediately isolated and treated to prevent disease spread;(b) As per the Construction Site Environmental and Hygiene Standards, the site should be equipped with basic first aid equipment, including common medicines, tourniquets, bandages, disinfectants, stretchers, etc.;(c) Provide all workers with basic training on hygiene, health, safety, and construction hazards. Implement an HIV and infectious disease protection program for workers and the local community. Focus on promoting OHS issues for all staff, and display prominent awareness materials at the construction site;(d) Establish a record management system to store and maintain relevant records to prevent loss or</p>			
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		damage. These records include documentation and reports of occupational accidents, diseases, and incidents. The records will be reviewed during compliance monitoring and audits.			
	Cultural Heritage	<p>Establish corresponding procedures for handling material cultural resources discovered during the construction phase. Once material cultural resources are found, the procedure should be immediately activated.</p> <p>(1)Immediately protect the site: Any unit or individual who discovers cultural relics should immediately stop construction and take measures to protect the site, preventing further damage or loss of the relics. Before professionals arrive, the construction unit should try to maintain the site as it is and avoid moving or damaging the relics in any way.</p> <p>(2)Report to the local cultural relics administrative department: After discovering cultural relics, the find should be immediately reported to the Qinzhou City Bureau of Culture, Radio, Television, Sports, and Tourism (which includes the Department of Cultural Heritage Protection, contact number: 0777-3687600). Upon receiving the report, the Bureau should arrive at the site within 24 hours and take appropriate measures based on the needs of cultural relics protection.</p> <p>(3)Handling by the cultural relics administrative department: After receiving the report, the cultural relics administrative department should promptly organize experts to conduct research and propose handling recommendations. If important cultural relics are discovered, the Qinzhou City People's Government should notify the public security authorities to assist in protecting the site.</p> <p>(4)Cultural relics protection measures: During the cultural relics' protection process, the public security authorities should maintain order at the site and prevent looting, illegal distribution, concealment, or damage of the cultural relics. If the relics are found to be state-owned, no unit or individual is allowed to loot, privately divide, or conceal them.</p>	Cultural Heritage Protection Law	Construction Contractor	AIIB, PIU, CSC,E SMA
Social	Expand participation,	(1) Throughout the project design and implementation, the PMO, PIU, and contractors will	/	PIU,	AIIB,

<p>decision-making, and consultation</p>	<p>ensure the timely, transparent, and widespread disclosure of project information—including project objectives, progress, and potential environmental and social impacts—through multiple channels such as village bulletin boards, social media, and government websites. This will ensure the public is fully informed of project developments.</p> <p>(2) Throughout the entire process of project design and implementation, the project PIU, together with relevant townships and affected villages and communities, will regularly organize public participation and consultation meetings to extensively solicit opinions from residents (including the 60 Zhuang individuals) and affected groups (including the 11 Zhuang individuals). This will fully ensure the public's rights to know, participate, and express opinions. Reasonable suggestions will be incorporated into project design and implementation, ensuring transparency and openness in the project management process.</p> <p>(3) In public engagement activities, emphasis will be placed on increasing the participation of vulnerable groups such as women, ethnic minorities and low-income populations. Their opinions and suggestions will be fully considered, and information will be disseminated using easy-to-understand and accessible methods, such as illustrated publicity materials, on-site explanations, and interactive discussions, to ensure their input is fully heard and taken into account in the project</p>		<p>Changtian Sub-district Office, the Village/Neighborhood Committees of Datong Town, and all contractors</p>	<p>PMO, and ESMA</p>
<p>Reduce the risk of land acquisition and demolition</p>	<p>Land acquisition and housing demolition compensation and resettlement measures shall be implemented in strict accordance with the requirements outlined in the approved RP, with particular attention to ethnic minorities, women and vulnerable groups to ensure all project-affected people receive reasonable compensation and proper resettlement. In order to mitigate the impacts of LA and HD and restore the living standards of the project-affected people, a detailed Livelihood Restoration Plan has been formulated as part of the RP.</p>		<p>PIU., Sub-district Office of Changtian, affected communities and Village/Neighborhood</p>	<p>AIIB, PMO, EESMA</p>

				Committees of Datong Town, the Qinbei District NRB, and the Qinbei District Land and Housing Expropriation Center.	
Community Health and Safety	Environmental impact	<p>1) Prior to the commencement of construction, the construction schedule, safety measures, and traffic management plan shall be communicated to residents and institutions (such as schools) within 200 meters of the construction area, and their feedback shall be solicited. During the construction period, continuous communication shall be maintained, with regular updates on progress and timely responses to residents' concerns. (including the 60 Zhuang individuals)</p> <p>(2) Low-noise equipment shall be used on-site. Temporary noise barriers or enclosures shall be installed around noisy machinery to mitigate noise transmission. Night-time construction hours shall be restricted, and advance notice shall be provided to residents if essential work is required. (including the 60 Zhuang individuals)</p> <p>(3) Dust suppression measures, including regular water spraying, shall be implemented in the construction area. Dust barriers and nets shall be erected, and enhanced sweeping and cleaning shall be conducted. Vehicle wheel washing facilities shall be installed at exits to prevent the spread of dust.</p> <p>(4) Dedicated waste storage areas shall be established, with regular collection and</p>		PIU, Changtian Sub-district Office, affected communities in Dadong Town, and surrounding village (residential) committees.	AiIB, PMO and ESMA

		<p>transport of waste to designated, compliant disposal sites. Domestic waste shall be handed over to the municipal sanitation department for unified treatment.</p> <p>(5) The construction footprint shall be strictly controlled to avoid damage to surrounding vegetation and ecosystems. Ecological restoration shall be promptly carried out upon completion of construction activities.</p>			
	Traffic Safety Risks	<p>(1) Construction vehicle routes shall be properly planned to avoid sensitive areas such as schools and residential neighborhoods where possible. Heavy vehicles are strictly prohibited during peak hours. When passing through such areas, vehicles must reduce speed and refrain from honking.</p> <p>(2) Speed limits, no-honking signs, warning signs, and safety barrier facilities shall be installed in construction zones. Night-time lighting shall be added to ensure the safety of residents.</p> <p>(3) All drivers of transport vehicles must receive safety training, strictly adhere to speed limits, and ensure regular vehicle maintenance. Loads shall be properly secured and covered with tarps to prevent spillage, ensuring safe and civilized transportation.</p> <p>(4) Public awareness campaigns on traffic and railway safety shall be strengthened through various channels, including community bulletin boards, media, distribution of pamphlets, and community meetings. This aims to enhance safety awareness and risk prevention capabilities, particularly among vulnerable groups such as women, the elderly, and children. (including the 60 Zhuang individuals)</p> <p>(5) Construction information, including progress and traffic detour notices, shall be promptly released to the community. Public participation shall be enhanced through continuous communication with residents, actively addressing and resolving their concerns.</p>		<p>PIU and Sub-district Office of Changtian, affected communities and Village/Neighborhood Committees of Datong Town, and the Traffic Police Brigade of Qinbei</p>	<p>AiB, PMO, ESMA</p>
	Impacts of Migrant	<p>(1) Awareness and training sessions on the prevention and control of infectious diseases (such as HIV/AIDS, STIs, and others) shall be conducted for residents in the project area (including the 60 Zhuang individuals) through community notices, informational materials,</p>		<p>PIU, Sub-district Office of</p>	

		Workers on Local Communities	<p>and training sessions to enhance their prevention awareness.</p> <p>(2) Contractual documents with contractors shall explicitly include requirements for worker health education and disease prevention and control. Awareness and training on the prevention of HIV/AIDS, STIs, and other infectious diseases shall be strengthened for all workers through the distribution of materials, posted posters, and organized training sessions to enhance their prevention awareness.</p> <p>(3) Proactive communication shall be maintained with village and community representatives in the project area. Construction management and worker pre-employment training shall emphasize respect for local customs and traditions to prevent unnecessary conflicts between migrant workers and local residents.</p>		Changtian, affected communities and Village/Neighborhood Committees of Datong Town, and the CDC of Qinbei District	
	Worker Conditions and Occupational Health & Safety	Working and	<p>(1) Establish and improve a labor contract management system:</p> <p>① Ensure that all hired employees, including temporary employees, sign labor and labor contracts in accordance with the law. The contract must clearly define the work content, construction period, salary standards, working hours, insurance benefits, labor conditions, occupational health protection measures and grievance mechanisms, and fully purchase accident insurance for workers through a third-party company.</p> <p>② The salary standard of project employees shall not be lower than the minimum wage standard of the Guangxi Zhuang Autonomous Region, and must be paid in full monthly. Any form of arrears or deductions is strictly prohibited. Working hours should comply with national legal standards; if overtime is really necessary, workers' consent should be obtained in advance and overtime wages should be paid in accordance with the law.</p> <p>③ During the recruitment process, social responsibilities should be actively fulfilled, priority should be given to absorbing local labor force, and appropriate preference should be given to women, low-income groups and other disadvantaged employment groups to promote</p>	/	PIU and Construction Contractor	AIB 、 PMO 、 ESMA

		<p>community employment and local economic development. All employment links must strictly follow the principles of openness, fairness, and transparency. Discrimination based on gender, ethnicity, religion, age, health status, or marital status is prohibited, and equal employment opportunities are guaranteed.</p> <p>④ It is strictly prohibited to employ persons under the age of 16; workers under the age of 18 are not allowed to work in hazardous positions. Resolutely put an end to any form of bonded labor and involuntary labor. Once illegal employment is discovered, the employment relationship will be terminated immediately and remedial measures will be taken.</p> <p>⑤ Require major suppliers to regularly submit labor management due diligence reports, covering aspects such as contract management, prohibition of child labor, equal pay for equal work, anti-gender discrimination and anti-forced labor.</p> <p>⑥ In the bidding and procurement documents of contractors and major suppliers, clearly incorporate labor management requirements into contract terms, including labor contract signing, wage payment, social insurance payment, OHS, and gender equality, and establish a third-party performance management and monitoring mechanism to ensure the effective implementation and comprehensive compliance of the system.</p> <p>(2) Labor working conditions:</p> <p>① The construction site should be equipped with safe drinking water, sanitation facilities, adequate rest areas and dormitories that meet regulations to meet the basic living needs of workers. ② The contractor shall keep the workplace clean and orderly and provide workers with necessary labor protection equipment. ③ Appropriate sanitary facilities and living conveniences should be provided according to the special needs of female workers, and their privacy and safety should be effectively guaranteed. ④ The project owner, supervision unit and construction contractor should clarify their respective responsibilities in terms of labor condition management, regularly inspect the safety and health conditions</p>			
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		<p>of living areas and workplaces, and accept the supervision of the project management office and relevant competent authorities. ⑤Require major suppliers to regularly submit self-examination reports on labor conditions, covering aspects such as employment compliance, wage payment, working hours, safety and security, and prohibition of child labor. ⑥ Conduct annual reviews and on-site labor condition verification on suppliers identified as high risk. ⑦ Clarify labor working conditions (LWC) compliance clauses in procurement contracts, and blacklist suppliers who seriously violate labor regulations. ⑧Strengthen communication with relevant enterprises such as photovoltaic equipment manufacturing, transportation and cold chain equipment supply to ensure that their operations comply with AIB standards and Chinese laws and regulations.</p> <p>(3) Occupational Health and Safety (OHS): ①Construction of responsibility system. Establish a clear OHS management system, implement and clarify the responsibilities of implementation units, construction contractors and subcontractors at all levels, ensure that safety responsibilities are implemented step by step, and form an effective responsibility traceability mechanism. ②Normal supervision and improvement mechanism. By establishing full-time safety management positions, we will implement continuous on-site safety inspections and hidden danger inspections, and implement closed-loop rectification management. At the same time, establish a regular security meeting mechanism to systematically report, evaluate and track security risks and the effectiveness of prevention and control measures to achieve dynamic management. ③Systematic training and capacity building. Ensure that pre-job and on-the-job safety education is carried out during the construction and operation periods, covering general skills such as fall prevention, electric shock prevention, mechanical injury prevention, chemical leak response and first aid. For high-risk special operation positions such as high-altitude operations, electrical operations, photovoltaic maintenance, and cold chain operations, mandatory special training will be implemented, and the certificate-based employment system will be strictly</p>			
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		<p>implemented. ④ Comprehensive operational risk control. According to national regulations, workers are equipped with and supervised to use qualified personal protective equipment (such as safety helmets, protective shoes, safety belts, goggles, etc.); at the same time, ensure good ventilation and lighting at the construction site, and effectively control occupational hazards such as noise, dust, and harmful gases; for high-risk operations such as high altitudes and electrical work, set up anti-fall devices, insulated tools and other engineering and technical measures; implement health and epidemic prevention and special protection in cold chain, warehousing and other areas. ⑤Emergency preparation and response guarantee. The site is equipped with first-aid medicines and emergency equipment, and an emergency coordination mechanism is established with the local hospital (Qinbei District People's Hospital) to ensure smooth medical rescue channels; emergency drills for fires, electric shocks, chemical leaks, falls from heights and other scenarios are organized regularly to improve actual handling capabilities. At the same time, the emergency response procedures for work-related injuries must be clarified and implemented to ensure that accident information reporting, rescue and subsequent compensation are timely and efficient.</p> <p>Safety measures for photovoltaic system construction. The construction of a 17.7MW distributed photovoltaic system on the rooftop of this project involves risks such as high-altitude work and electrical operation, and the following prevention and control requirements must be strictly implemented during construction: (i) Construction personnel must complete special training for high-altitude work and hold a certificate; (ii) Use safety ropes, double-hook safety belts, anti-fall guardrails and anti-slip passages during operation; (iii) Implement electrical grounding testing, line insulation inspection and power outage permit management to strictly prevent electric shock accidents; (iv) In case of bad weather such as high temperature and thunderstorms, stop outdoor high-altitude work immediately; (v) The construction site shall be equipped with eye-catching safety warning signs, and first</p>			
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		<p>aid materials and communication equipment shall be equipped.</p> <p>(4) Equal Employment and Gender Protection: (i) Comply with national labor laws and regulations, abide by the principle of equal opportunities, and strictly prohibit any form of discrimination against women, disabled people, migrant workers, and young people with legal working age in the recruitment and employment process. During the implementation of the project, the protection of the rights and interests of female employees will be fully implemented, ensuring that the centralized office area is equipped with safe drinking water, sanitary facilities and rest areas, and setting up sanitary facilities for men and women to ensure privacy and basic hygiene needs. (ii) In terms of gender equality and prevention of sexual harassment, the project unit will formulate a special system to clarify prohibited behaviors and corresponding punishment measures, and set up a full-time environmental and social management person to supervise the implementation. All contractors, subcontractors and suppliers must implement sexual harassment prevention and gender equality measures, and incorporate relevant content into daily management training to ensure that all construction personnel are covered, covering topics such as vocational skills, production safety, gender equality and sexual harassment prevention. Regularly organize systematic training for project managers and workers on gender equality, gender-based violence and sexual exploitation/harassment (GBV/SEA/SH) prevention, and post promotional materials in office and accommodation areas. (iii) At the same time, effectively ensure that female employees enjoy equal rights in recruitment, promotion, benefits, pregnancy and maternity leave, provide a safe and hygienic working and living environment for female workers, and protect the legitimate rights and interests of pregnancy and lactation in accordance with the law. (iv) Establish a confidential and secure GBV/SEA/SH appeal mechanism at the project level, set up a full-time complaint recipient, ensure smooth complaint channels, timely and professional handling process, respect privacy, and allow anonymous appeals. In addition, establish a collaborative network with local women's</p>			
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			<p>federations, public security agencies, and legal aid organizations to provide victims with psychological counseling, legal support, and medical assistance.</p> <p>(5) Strengthen publicity and training: With the assistance of PIU and local functional departments, carry out training on OHS, gender equality and anti-sexual harassment, labor rights, and infectious disease prevention and control for project management personnel, contractors and workers. and distribute propaganda posters, leaflets, etc. to workers.</p> <p>(6) Establish and improve the grievance mechanism: ensure that workers' complaints can be handled anonymously and confidentially, and feedback the handling results to the complainant in a timely manner, and inform the AIIB of the mechanism established by the AIIB to inform the project-affected people.</p>			
	Increase employment opportunities		<p>(1) During the project construction period, priority for employment opportunities will be given to local residents. It is estimated that 1,309 temporary jobs will be created, comprising 924 skilled jobs and 385 unskilled jobs. (including the 60 Zhuang individuals)</p> <p>(2) During the construction period, contractors are explicitly required to adhere to the principles of equal opportunity and fair treatment in recruitment and employment practices, without any form of discriminatory provisions.</p> <p>(3) Ensure that employment practices are legal and compliant, prohibiting the use of child labor and forced labor.</p>		Construction Contractor	AIIB, PMO, PIU and ESMA
Operation Phase						
Environmental	Air Quality	Exhaust gases from internal combustion	Choose low-emission vehicles, enhance internal combustion engine adjustments, and improve fuel combustion efficiency	/	PIU, Construction Contractors	AIIB, EB, ESMA

	engine fuels				
	Vehicle exhaust gases from the entrance trunk road.	(1)Enhance roadside greening: Plant trees, shrubs, and grass species that can absorb pollutants in vehicle exhaust gases along both sides of the road to control the dispersion of exhaust gases into the surrounding environment. (2)Improve overall road service levels: Strengthen road management and pavement maintenance, maintain roads in good operating condition to ensure smooth traffic flow, reduce vehicle idling times, and decrease overall vehicle exhaust emissions.	/		
	Exhaust gases from vehicles at intermodal freight yards and logistics parks	(1)Strengthen organizational management: Inspect vehicles to prohibit those in poor condition, overloaded, or with poorly covered cargo that may spill from operating on the road. (2)Enhance management to reduce vehicle idling: Minimize vehicle idle time and reduce the impact of vehicle exhaust emissions on the surrounding air quality. (3)Promote clean energy: Use clean energy for cargo handling vehicles at intermodal freight yards and logistics parks to further reduce the environmental impact on surrounding air quality. (4)Set up road maintenance personnel: Assign personnel to regularly clean and water the roads to reduce dust and maintain cleanliness. (5) Regularly clean the cargo storage yard and implement water sprinkling to suppress dust. (6) Equip mist cannons for timely spraying when dust occurs. (7) Install wind and dust control nets in the container storage area to reduce lateral dust dispersion.	/		
	cooking fume	(1) Combined Building of Multimodal Freight Yard: An oil fume purifier with a purification efficiency of no less than 75% plus a dedicated flue, with a fan air volume of 4,000 m³/h;	Emission Standard for		

			(2) Restaurant in the Comprehensive Service Center of the Logistics Park: An oil fume purifier with a purification efficiency of no less than 85% plus a dedicated flue, with a fan air volume of 16,000 m³/h.	Cooking Fume (Trial) (GB18483-2001)		
		Waste Transfer Station Exhaust Gas	<p>(1) Atomizing nozzle devices shall be installed in the entire unloading hall, above the hoppers and compression devices, and deodorization shall be carried out using natural plant extract deodorants;</p> <p>(2) The transfer station shall be equipped with an airtight negative pressure ventilation system, along with 1 set of negative pressure ventilation deodorization and dust removal system (spray dust suppression + biological filter + activated carbon adsorption) and a 15-meter-high exhaust stack;</p> <p>(3) Deodorants shall be regularly sprayed outside the compression workshop.</p>	<p>The concentrations of NH₃, H₂S and odor shall meet the secondary standards specified in Emission Standards for Odor Pollutants (GB 14554-93), and the concentration of particulate matter shall meet the secondary standards specified in Integrated Emission Standards for Air Pollutants (GB</p>		

				16297-1996).		
	Sound Environment	Noise from the Entrance Trunk Road and internal roads within the logistics park	<p>(1) Install sound insulation windows at sensitive points such as Laoba Village, Qingtang Village, and Maxiong Village where noise prediction exceeds the standard;</p> <p>(2) Set up no-horn signs at noise-sensitive points along the route, restrict vehicle speed, prohibit overloaded vehicles, restrict large vehicles from overspeeding at night, improve road traffic markings and signs, and install necessary isolation facilities to prevent pedestrians from randomly crossing expressways. The road administration department shall conduct regular maintenance of roads to improve pavement smoothness and reduce vehicle vibration noise;</p> <p>(3) Strengthen traffic management and maintenance of highways, strictly control vehicles with substandard conditions from getting on the road, and reduce noise increments caused by severe overloading and poor vehicle conditions;</p> <p>(4) Strengthen tracking and monitoring of the acoustic environment at sensitive points along the line during the operation period, and take effective noise reduction measures in a timely manner based on monitoring results.</p>	<p>Within 35 meters on both sides of the boundary line of the Entrance Trunk Road, the Class 4a standards specified in Environmental Quality Standard for Noise (GB 3096-2008) shall apply; beyond this range, the Class 2 standards shall apply. Within 35 meters of the north side of the boundary of Hengwu Road, the south side of the boundary of Hengjiu Road, and the east side</p>	PIU, Construction Contractors	AIIB, EB, ES MA

				of the boundary of Zong'er Road, the Class 4a standards shall apply; within 20 meters on both sides of the boundary line of other internal roads within the logistics park, the Class 4a standards shall apply.		
		Noise from the dedicated line	(1) Strengthen source intensity control. Railway construction and operation units shall strengthen line maintenance, vehicle maintenance, regular inspection, wheel re-profiling, etc., and purchase new, low-noise car bodies; (2) Plant green shelterbelts on both sides of the railway.	The Class 2 standards specified in Environmental Quality Standard for Noise (GB 3096-2008) shall apply.		
		Noise from the Intermodal Freight	(1) Select equipment with ultra-low noise and low operating vibration, and take measures such as pedestal vibration reduction, rubber vibration reduction joints and vibration reduction pads during installation; (2) Set up sound insulation operating rooms in workshops with concentrated equipment,	The Class 3 standards specified in Environmental		

	Yard and garbage transfer station	<p>severe reverberation and difficulty in taking sound insulation measures to reduce noise pollution;</p> <p>(3) Make overall planning and rational layout in the general layout of the factory area, and pay attention to noise prevention distance;</p> <p>(4) Green the available open spaces around the Intermodal Freight Yard and garbage transfer station according to actual conditions;</p> <p>(5) Maintain equipment regularly to ensure normal operation; strengthen management of vehicle transportation process, prohibit horn honking, and limit speed in the yard.</p>	Quality Standard for Noise (GB 3096-2008) shall apply.		
	Water Environment	<p>(1) Domestic sewage and wastewater from the warehousing and logistics area shall be treated in septic tanks to meet Grade III Standard specified in the Integrated Wastewater Discharge Standard (GB 8978-1996) as well as the influent water quality requirements of Huangma Wastewater Treatment Plant, before being finally discharged into the plant.</p> <p>(2) Wastewater from the garbage transfer station mainly includes leachate, vehicle washing wastewater, workshop flushing wastewater, wastewater from deodorization equipment and initial rainwater. All such wastewater shall be uniformly collected in the leachate collection tank, and then transported to Huangma Wastewater Treatment Plant in Qinbei District by closed tank trucks on a daily basis.</p> <p>(3) Surface runoff caused by rainfall during the operation period shall be discharged into the comprehensive drainage system and then into surface water bodies after sedimentation. The operation of various leaking, bulk-loaded and overloaded vehicles on the road is strictly prohibited to prevent soil and water pollution along the line caused by scattered goods. Regularly clean the side ditches, intercepting ditches and rectangular covered ditches along the entire line to ensure the smooth operation of the drainage system.</p> <p>(4) The ground of all storage areas of the project shall be subject to hardened and anti-seepage treatment. The sewage shall be collected by the pipe network and treated in septic</p>	<p>Integrated Wastewater Discharge Standard (GB8978-1996)</p>	PIU, all contractors	AIIB, EEB, ESMA

		<p>tanks, and then discharged into the wastewater treatment plant through the pipe network.</p> <p>(5) The temporary storage room for hazardous waste shall be equipped with anti-leakage, anti-overflow and anti-corrosion measures.</p> <p>(6) Strengthen management, improve the technical proficiency of operators, formulate inspection plans, and arrange special personnel to conduct regular inspections on the condition of sewage pipelines and ground anti-seepage.</p>			
Vibration Environment	dedicated railway line	<p>(1) During the operation period, the maintenance of wheel and rail shall be strengthened; regular rail grinding, wheel cleaning and wheel turning shall be carried out to ensure their good operating status and reduce additional vibration.</p> <p>(2) The operating unit shall, in accordance with the operation period environmental monitoring plan proposed in this report, strengthen the vibration environment tracking monitoring for the protection targets (9 households in Laocun Village) along the line, and take further measures in a timely manner based on the monitoring results to minimize the impact of vibration.</p>	<p>Standard: In urban built-up areas, in accordance with Environmental Vibration Standard (GB10070-83), the vibration limit is $\leq 80\text{dB(A)}$ in daytime and $\leq 80\text{dB(A)}$ at nighttime.</p>	PIU, all contractors	AIIB, EEB, ESMA
Solid Waste	Domestic waste	<p>(1) Domestic waste generated by the project's freight station yard and warehousing processing facilities shall be placed in the garbage transfer station for compression every day, and then transported by the local environmental sanitation department to the urban domestic waste disposal site using closed transport vehicles. The food waste and other catering wastes in the station shall be collected separately; the domestic waste collection and lifting equipment shall be kept intact and in normal use, and garbage classification and</p>	<p>Regular collection and transportation</p>	PIU, all contractors	AIIB, EEB, ESMA

			<p>collection shall be implemented. All waste shall be cleaned and disposed of uniformly by the local environmental sanitation department every day to ensure daily collection and disposal.</p> <p>(2) The domestic and greening waste in the station mainly includes debris scattered by passing vehicles, garbage discarded by pedestrians, branches and leaves produced by the large trees in the station, etc. The quantity is small; it shall be cleaned regularly by the environmental sanitation department and finally transported to the waste incineration plant for disposal.</p>			
		Production Waste	<p>(1) Waste solar panels during maintenance are directly removed and recycled by the manufacturer, without being temporarily stored on-site.</p> <p>(2) Waste transportation packaging materials (plastic, wood, etc.) are collected and directly sold to recycling stations, without being temporarily stored on-site</p>	Recycling and reuse, no discharge into the environment		
		Hazardous Waste	<p>(1) Waste oil: Automotive Export Trade Center generates waste engine oil as hazardous waste, temporarily stored in the hazardous waste storage area, and disposed of by a qualified unit. Oily rags from equipment maintenance are collected in special containers and temporarily stored in the hazardous waste storage area, regularly disposed of by a qualified unit.</p> <p>(2) Waste activated carbon: The project uses activated carbon for exhaust treatment. It will be periodically replaced, and the used activated carbon will be stored in dedicated containers, temporarily stored in the hazardous waste storage area, and disposed of by a qualified unit.</p> <p>(3) Waste batteries: The photovoltaic project and the power supply system in the park may generate waste batteries, classified as hazardous waste, which will be collected and disposed of by a qualified unit.</p>	Standard for Pollution Control on Hazardous Waste Storage (GB 18597-2023)		
Ecological	Project: Impact on Biological Resources		(1) Strengthen the management and protection of greening vegetation during its growth period to ensure its survival rate, shorten the recovery time of greening vegetation, and	/	PIU, all contractors	AIIB, EB, ES

Environment	and Ecological Diversity	<p>replant vegetation as soon as possible to make up for the vegetation biomass loss caused by construction. At the same time, regularly inspect the greening areas and the growth status of vegetation, and promptly replant dead plants to prevent the invasion of alien plant species.</p> <p>(2) During the operation period, monitor the distribution dynamics of invasive alien species. Remove any invasive alien species that enter the project's occupied area.</p>			MA , forestry bureau
Environmental Risks		<p>The following measures shall be adopted for the storage and use of diesel for diesel generators, NH3 refrigerant, and other potential hazardous chemicals:</p> <p>(1)Source Control: Optimize the storage and use processes of hazardous chemicals to reduce leakage; select compliant non-hazardous chemical raw materials and conduct strict quality control.</p> <p>(2)Zoned Protection: Locate the hazardous cargo functional area away from other functional areas and office-living facilities on the leeward side of the dominant wind direction, and maintain a safe distance from surrounding facilities; install emergency collection facilities such as anti-leakage, anti-seepage and cofferdam facilities for hazardous chemicals, and equip basic protection facilities in the storage area of non-hazardous chemical products; adopt targeted protective measures for equipment involving flammable and explosive media based on their characteristics.</p> <p>(3)Signage and Accessways: Install safety signs and apply safety colors in accident-prone areas; set up eye-catching signs for emergency accessways and exits in production and operation areas.</p> <p>(4)Monitoring and Early Warning: Install real-time monitoring and alarm equipment for hazardous chemicals, and conduct regular hidden danger inspections for the storage of non-hazardous chemicals.</p> <p>(5)Emergency Response: Formulate special emergency plans, equip complete emergency supplies and organize regular drills.</p>	/	PIU, all contractors	AIB,E EB,ES MA

		(6)Compliant Disposal: Entrust qualified entities with the standardized disposal of waste hazardous chemicals and strictly implement environmental protection requirements.			
	Occupational Health and Safety (OHS)	<p>(1) Develop an environmental and social management plan for the operation phase, and provide regular training for workers.</p> <p>(2) Provide workers with free personal protective equipment, including safety goggles, gloves, and safety shoes; provide noise-reduction equipment for workers in high-noise environments.</p> <p>(3) Develop emergency preparedness and response plans for accidents and emergencies, clearly define reporting procedures. This includes environmental and public health emergencies related to hazardous material leaks and similar events.</p> <p>(4) Provide training on OHS, and emergency response to workers, and offer specialized OHS training for those working with hazardous waste.</p>	/	PIU, all contractors	AIIB, EB, ESMA
Social	Increase employment opportunities	<p>(1) During the project operational phase, priority for employment opportunities will be given to local residents (including the 60 Zhuang individuals). It is estimated that 91 jobs will be created, comprising 79 skilled jobs and 12 unskilled jobs.</p> <p>(2) The project operator shall adhere to the principles of equal opportunity and fair treatment in recruitment and employment practices, prohibiting any form of discriminatory provisions, such as restrictions based on age or gender of applicants.</p> <p>(3) Relevant professional skill training (e.g., in logistics management, equipment operation, warehouse maintenance) shall be provided for new employees to enhance their employability.</p>	/	PIU	AIIB, ESMA
	Community Healthcare and Safety	(1) The project operator shall regularly release operational information through channels such as community bulletin boards, online platforms, and service hotlines, and systematically collect and respond to residents' requests. Biannual consultation meetings shall be organized for affected residents, including 21 households impacted by railway noise and 9 households impacted by vibration in sensitive areas like Lao Village.	/	PIU, the Sub-district Office of Changtian, and the	AIIB, ESMA

		<p>Environmental monitoring data on noise and vibration shall be disclosed, and the effectiveness of existing mitigation measures along with potential improvements shall be discussed to ensure residents' concerns are promptly addressed.</p> <p>(2) For scattered households in sensitive areas like Lao Village affected by noise and vibration, noise reduction measures such as the installation and maintenance of noise-reducing windows shall be implemented to protect their residential environmental quality from long-term disturbance.</p> <p>(3) Along the dedicated railway line and traffic routes, ongoing public awareness campaigns on traffic and railway safety shall be conducted through community notices, informational materials, and dedicated lectures. These efforts shall specifically target groups such as women, ethnic minorities, the elderly, and students to enhance their recognition and prevention capabilities regarding traffic and railway risks, ensuring a safe travel environment.</p> <p>(4) The operator shall regularly organize health education and disease prevention training for workers. This includes knowledge on the prevention and control of infectious diseases such as HIV/AIDS, STIs, and tuberculosis, utilizing methods like distributing materials, posting posters, and holding lectures to strengthen workers' self-protection awareness and capability.</p> <p>(5) Domestic waste shall be collected and disposed of by the municipal sanitation department uniformly. Hazardous waste must be collected, temporarily stored, and transported by qualified units. The project operator shall regularly inspect waste management practices and maintain cleanliness in the operational area to prevent pollution.</p>		<p>Village/Neighborhood Committees of Datong Town, the Traffic Police Brigade of Qinbei District</p>	
	<p>Worker Working Conditions and Occupational Health &</p>	<p>(1) Establish and improve a labor contract management system: ① Ensure that all hired employees, including temporary employees, sign labor and labor contracts in accordance with the law. The contract must clearly define the work content, construction period, salary</p>		<p>PIU and Contractors</p>	<p>AIIB, ESMA</p>

	Safety	<p>standards, working hours, insurance benefits, labor conditions, occupational health protection measures and grievance mechanisms, and fully purchase accident insurance for workers through a third-party company. ② The salary standard of project employees shall not be lower than the minimum wage standard of the Guangxi Zhuang Autonomous Region, and must be paid in full monthly. Any form of arrears or deductions is strictly prohibited. Working hours should comply with national legal standards; if overtime is really necessary, workers' consent should be obtained in advance and overtime wages should be paid in accordance with the law. ③ During the recruitment process, social responsibilities should be actively fulfilled, priority should be given to absorbing local labor force, and appropriate preference should be given to women, low-income groups and other disadvantaged employment groups to promote community employment and local economic development. All employment links must strictly follow the principles of openness, fairness, and transparency. Discrimination based on gender, ethnicity, religion, age, health status, or marital status is prohibited, and equal employment opportunities are guaranteed. ④ It is strictly prohibited to employ persons under the age of 16; workers under the age of 18 are not allowed to work in hazardous positions. Resolutely put an end to any form of bonded labor and involuntary labor. Once illegal employment is discovered, the employment relationship will be terminated immediately and remedial measures will be taken. ⑤ Require major suppliers to regularly submit labor management due diligence reports, covering aspects such as contract management, prohibition of child labor, equal pay for equal work, anti-gender discrimination and anti-forced labor. ⑥ In the bidding and procurement documents of contractors and major suppliers, clearly incorporate labor management requirements into contract terms, including labor contract signing, wage payment, social insurance payment, OHS, and gender equality, and establish a third-party performance management and monitoring mechanism to ensure the effective implementation and comprehensive compliance of the system.</p>			
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		<p>(2) Labor working conditions: ① The construction site should be equipped with safe drinking water, sanitation facilities, adequate rest areas and dormitories that meet regulations to meet the basic living needs of workers. ② The contractor shall keep the workplace clean and orderly and provide workers with necessary labor protection equipment. ③ Appropriate sanitary facilities and living conveniences should be provided according to the special needs of female workers, and their privacy and safety should be effectively guaranteed. ④ The project owner, supervision unit and construction contractor should clarify their respective responsibilities in terms of labor condition management, regularly inspect the safety and health conditions of living areas and workplaces, and accept the supervision of the project management office and relevant competent authorities. ⑤ Require major suppliers to regularly submit self-examination reports on labor conditions, covering aspects such as employment compliance, wage payment, working hours, safety and security, and prohibition of child labor. ⑥ Conduct annual reviews and on-site labor condition verification on suppliers identified as high risk. ⑦ Clarify LWC compliance clauses in procurement contracts, and blacklist suppliers who seriously violate labor regulations. ⑧ Strengthen communication with relevant enterprises such as photovoltaic equipment manufacturing, transportation and cold chain equipment supply to ensure that their operations comply with AIB standards and Chinese laws and regulations.</p> <p>(3) Occupational Health and Safety: ① Construction of responsibility system. Establish a clear OHS management system, implement and clarify the responsibilities of implementation units, construction contractors and subcontractors at all levels, ensure that safety responsibilities are implemented step by step, and form an effective responsibility traceability mechanism. ② Normal supervision and improvement mechanism. By establishing full-time safety management positions, we will implement continuous on-site safety inspections and hidden danger inspections, and implement closed-loop rectification management. At the same time, establish a regular security meeting mechanism to</p>			
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		<p>systematically report, evaluate and track security risks and the effectiveness of prevention and control measures to achieve dynamic management. ③Systematic training and capacity building. Ensure that pre-job and on-the-job safety education is carried out during the construction and operation periods, covering general skills such as fall prevention, electric shock prevention, mechanical injury prevention, chemical leak response and first aid. For high-risk special operation positions such as high-altitude operations, electrical operations, photovoltaic maintenance, and cold chain operations, mandatory special training will be implemented, and the certificate-based employment system will be strictly implemented. ④ Comprehensive operational risk control. According to national regulations, workers are equipped with and supervised to use qualified personal protective equipment (such as safety helmets, protective shoes, safety belts, goggles, etc.); at the same time, ensure good ventilation and lighting at the construction site, and effectively control occupational hazards such as noise, dust, and harmful gases; for high-risk operations such as high altitudes and electrical work, set up anti-fall devices, insulated tools and other engineering and technical measures; implement health and epidemic prevention and special protection in cold chain, warehousing and other areas. ⑤Emergency preparation and response guarantee. The site is equipped with first-aid medicines and emergency equipment, and an emergency coordination mechanism is established with the local hospital (Qinbei District People's Hospital) to ensure smooth medical rescue channels; emergency drills for fires, electric shocks, chemical leaks, falls from heights and other scenarios are organized regularly to improve actual handling capabilities. At the same time, the emergency response procedures for work-related injuries must be clarified and implemented to ensure that accident information reporting, rescue and subsequent compensation are timely and efficient.</p> <p>Safety measures for photovoltaic system operation and maintenance. The project builds a 17.7MW distributed photovoltaic system on the rooftop, and its operation and maintenance</p>			
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		<p>involves risks such as high-altitude work and electrical operation, and the following prevention and control requirements must be strictly implemented in daily operation and maintenance: (i) operation and maintenance personnel must complete special training for high-altitude work and hold a certificate; (ii) standardize the use of safety ropes, double-hook safety belts, anti-fall guardrails and anti-slip channels during operation; (iii) Implement electrical grounding testing, line insulation inspection and power outage permit management to strictly prevent electric shock accidents; (iv) In case of bad weather such as high temperature and thunderstorms, stop outdoor high-altitude work immediately; (v) Eye-catching safety warning signs are set up at the operation and maintenance site, and first aid materials and communication equipment are equipped.</p> <p>(4) Equal Employment and Gender Protection: (i) Comply with national labor laws and regulations, abide by the principle of equal opportunities, and strictly prohibit any form of discrimination against women, disabled people, migrant workers, and young people with legal working age in the recruitment and employment process. During the implementation of the project, the protection of the rights and interests of female employees will be fully implemented, ensuring that the centralized office area is equipped with safe drinking water, sanitary facilities and rest areas, and setting up sanitary facilities for men and women to ensure privacy and basic hygiene needs. (ii) In terms of gender equality and prevention of sexual harassment, the project unit will formulate a special system to clarify prohibited behaviors and corresponding punishment measures, and set up a full-time E&S management person to supervise the implementation. All contractors, subcontractors and suppliers must implement sexual harassment prevention and gender equality measures, and incorporate relevant content into daily management training to ensure that all construction personnel are covered, covering topics such as vocational skills, production safety, gender equality and sexual harassment prevention. Regularly organize systematic training for project managers and workers on gender equality, gender-based violence and</p>			
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		<p>sexual exploitation/harassment (GBV/SEA/SH) prevention, and post promotional materials in office and accommodation areas. (iii) At the same time, effectively ensure that female employees enjoy equal rights in recruitment, promotion, benefits, pregnancy and maternity leave, provide a safe and hygienic working and living environment for female workers, and protect the legitimate rights and interests of pregnancy and lactation in accordance with the law. (iv) Establish a confidential and secure GBV/SEA/SH appeal mechanism at the project level, set up a full-time complaint recipient, ensure smooth complaint channels, timely and professional handling process, respect privacy, and allow anonymous appeals. In addition, establish a collaborative network with local women's federations, public security agencies, and legal aid organizations to provide victims with psychological counseling, legal support, and medical assistance.</p> <p>(5) Strengthen publicity and training: With the assistance of PIU and local functional departments, carry out training on OHS, gender equality and anti-sexual harassment, labor rights, and infectious disease prevention and control for project management personnel, contractors and workers. and distribute propaganda posters, leaflets, etc. to workers.</p> <p>(6) Establish and improve the grievance mechanism: ensure that workers' complaints can be handled anonymously and confidentially, and feedback the handling results to the complainant in a timely manner, and inform the AIIB of the mechanism established by the AIIB to inform the project-affected people.</p>			
GAP	Increased Employment Opportunities for Women	<p>(1) During both the project construction and operational phases, priority for employment opportunities, especially for unskilled positions, shall be given to women from the villages and communities within the project area. For jobs with low physical demands, age restrictions may be appropriately relaxed to prioritize the hiring of women who face difficulties in finding non-agricultural employment. Employment opportunities for women shall be further increased through skills training. Furthermore, within the logistics park, focus will be placed on new forms of employment such as couriers, truck drivers,</p>	/	Contractor(s)	AIIB, PMO, PIU, ESMA

		warehouse operatives, and e-commerce/livestreaming roles, promoting women's equal access to and benefit from these emerging employment sectors. (2) The principles of equal employment and equal pay for equal work shall be strictly implemented.			
	Enhanced Women's Participation in Decision-Making	(3) Encourage and support the participation of all women in the project area in project design, decision-making, and various consultation activities, including those related to information disclosure, land acquisition compensation, resettlement, construction progress, and E&S impact communication. (4) Project information, including key details on compensation, resettlement, and livelihood restoration, shall be promptly disseminated to women through bulletin boards, WeChat groups, community notices, and other means, ensuring comprehensive and effective information delivery. The target is to increase the information awareness rate among women to 75% (Baseline: 40%). (5) During negotiations for land acquisition and compensation and the formulation of resettlement plans, ensure women's participation in consultations, with a target of no less than 40% female representation (Baseline: 20%). (6) Set up full-time female positions in charge of gender affairs in the PIU, and invite the Qinbei District Women's Federation to participate to ensure the effective implementation of environmental and social management plans (including gender action plans). (7) Promote the development of a female-friendly community within the logistics park by establishing a women's organization and supporting facilities such as a "Women's Home," providing comprehensive services including communication and mutual support, capacity-building, and rights protection for female workers in the park.	/	PMO, PIU, Contractor(s). Qinbei District Women's Federation	AIIB and ESMA
	Enhancing Women's Development Capacity	(8) During both the project construction and operational phases, ensure that 90% of female workers participate in training related to vocational skills, safety production, and gender equality (Baseline: 50%). (9) During project implementation, organize employment training and knowledge lectures,	/	PIU Contractor(s) Qinbei District	AIIB and ESMA

		leveraging relevant departments such as the Women's Federation and the Human Resources and Social Security Bureau, as well as communities, to improve women's employment and entrepreneurship skills and opportunities.		Women's Federation	
	Mitigating Gender-Based Violence Risks	<p>(10) The Qinbei District Women's Federation will assist and participate in the PIU to establish a project grievance mechanism, including a project grievance mechanism for gender violence, sexual harassment and sexual assault, including complaint registration, data management, confidentiality requirements, etc., to ensure that the privacy and safety of the complainant are effectively protected, and at the same time protect the complaint handling members from prejudice and retaliation.</p> <p>(11) Under the guidance of the Qinbei District Women's Federation, cooperate with the PIU to regularly carry out gender equality and anti-sexual harassment publicity and education activities in the project workplace and community. At the same time, strengthen the supervision of construction sites to avoid harmful behaviors such as sexual violence, sexual exploitation and abuse.</p> <p>(12) order to strengthen the protection of the rights and interests of female workers, the PIU will establish a collaborative mechanism with the Qinbei District Women's Federation to provide training and publicity for female workers through regular mental health counseling and rights protection training, so as to improve women's self-protection ability.</p>		PIU, Contractor(s), the Sub-district Office of Changtian and Datong Town, the Women's Federation of Qinbei District.	AIIB, PMO, and ESMA

PMO = Project Management Office, PIU = Project Implementing Unit, CSC = Construction Supervision Company, EEB = Ecology and Environment Bureau, ESMA = Environmental and Social Monitoring Agency

IV. Training and Capacity Building

19. The project area has no prior experience in implementing AIIB-financed projects. Although China's domestic Environmental Impact Assessment (DEIA) and Social Stability Risk Assessment (SSRA) in China propose corresponding environmental and social mitigation measures, specific regulatory requirements for the ESMP as mandated by the AIIB have not been established. Consequently, the full implementation of the AIIB's ESMP represents a major new undertaking for local institutions.

20. During the Project implementation, capacity-building activities will be conducted in the following areas: (i) implementation of the ESMP, including mitigation measures, monitoring, and reporting; (ii) Biodiversity conservation; (iii) Climate Change adaptation and mitigation measures; (iv) Social management, including RP implementation, labor management, gender equality and social inclusion, community communication mechanisms, protection of vulnerable groups, and operation of GRMs. Training will be provided by the Loan Implementation Environmental Consultant and Social Consultant recruited by PIU, as part of the Project's integrated capacity-building framework. Participants will include relevant personnel from the PMO, PIU, CSC, and Construction Contractors.

Table 3: Project Environmental and Social Training Plan

Training Plan	Training Scope	Trainers	Participants	Sessions	Days	Number of Participants
Procurement and Contract Management (emphasizing the implementation of environmental and social management plans)	<ul style="list-style-type: none"> • AIB procurement guidelines; • Tender documents and contract preparation, including environmental and social management plan clauses; • Risks of improper procurement and mitigation measures, and handling of change orders and contract management. 	E&S experts	PMO, PIU	1	0.5	50
Implementation of Environmental and Social Management Plans	<ul style="list-style-type: none"> • Roles, responsibilities, supervision, inspection, and reporting in the environmental and social management plans; • Environmental and social monitoring schemes; • Environmental and social impacts and mitigation measures; • Public participation; • GRM implementation, coordination, reporting, and public collaboration; • Project-affected People's Mechanism (PPM) • Environmental, health, and safety for workers and communities during construction and operation; • Prevention and control of infectious diseases and HIV/AIDS. 	E&S experts	PMO, PIU, CSC, contractors	1	1	50
Biodiversity Conservation	<ul style="list-style-type: none"> • Plant biodiversity conservation; Survey and identification of native vegetation in the Project area; Vegetation avoidance and transplantation techniques during construction; Restoration plans for temporarily occupied vegetation 	Environmental expert	PMO, PIU, CSC, contractors	1	0.5	30

	<p>areas; and Key monitoring protocols for rare plant species protection</p> <ul style="list-style-type: none"> •Animal biodiversity conservation: Distribution mapping of terrestrial/aquatic animal habitats in the Project area; Mitigation measures to prevent construction-induced disturbance to wildlife; Protection of animal migration corridors; and Emergency response protocols for wildlife injury incidents. 					
Climate Change Adaptation	<p>Climate mitigation measures: Low-carbon construction technologies (use of energy-efficient construction equipment, reduction of construction fugitive dust); Operational energy consumption optimization; and Contribution of green electricity utilization to regional carbon emission reduction</p> <ul style="list-style-type: none"> • Climate adaptation measures: Construction safety protection plans under extreme weather conditions (high temperature, heavy rainfall, typhoons); Climate-adaptive operation and maintenance (O&M) for photovoltaic components (wind/rain resistance); and Climate resilience enhancement measures for the Project-area ecosystems. 	Climate change expert	PMO, PIU, CSC, contractors	1	0.5	30
Social management, including implementation experience of the Resettlement Plan (RP), Ethnic Minority Development Measures, Gender Action Plan, and Stakeholder Engagement Plan (SEP).	<ul style="list-style-type: none"> • Social risk mitigation measures • Community Health and Safety • OHS of workers • Labor rights protection and labor management • Resettlement livelihood restoration measures for immigrants 	Social expert	PMO, PIU, CSC, contractors	1	0.5	30

	<ul style="list-style-type: none"> • Protection of the Rights and Interests of Ethnic Minorities • Gender equality and social inclusion • Public participation and information disclosure • GRM and PPM 					
Total				6	3	190

PMO = Project Management Office, PIU = Project Implementing Unit, CSC = Construction Supervision Company,

V. Monitoring and Reporting

21. During the project implementation, environmental and social monitoring will be conducted throughout the construction and operation phases to ensure compliance with the AIIB'S ESF requirements, The Project's ESMP outlines two types of monitoring: (1) Internal monitoring: To be carried out by the PMO, PIU and CSC ; (2) External monitoring: To be performed by an external ESMA engaged by PMO. The specific details are as follows:

22. **Internal Monitoring.** During the construction phase, the CSC will conduct internal E&S monitoring as in accordance with the monitoring plan. The monitoring covers Project progress, implementation status of the ESMP, and GRM performance data. The CSC will submit the monitoring results to the PIU through monthly reports, and the PIU will then forward these reports to the PMO.

23. **External Monitoring.** The PIU will engage at least one independent third-party ESMA to conduct the external E&S monitoring stipulated in this ESMP. The external E&S monitoring will cover all construction activities and extend into the operational phase. The appointed ESMA will prepare environmental and social monitoring reports, including monitoring methods and results, and submit these reports to the AIIB, the PMO, and the PIU.

24. **Project Progress Report (including internal environment and social performance monitoring).** During the project implementation, the PIU shall document the progress of environmental and social management work of the project and compile the E&S Project Progress Report. As an integral part of the overall project progress report, this report shall be submitted to the PMO and the AIIB, with the submission frequency aligned with that of the overall project progress report. The current frequency is quarterly, and it shall be adjusted accordingly in line with any changes to the submission frequency of the overall project progress report.

25. **External Environmental and Social Monitoring Report (ESMR).** The External ESMA shall concurrently submit the External ESMRs to the AIIB, the PMO, and the PIU. The reporting frequency is set at quarterly during the first year of the Project implementation phase. For subsequent years, the frequency will be semi-annual, subject to approval by the AIIB.

26. The reporting schedule required during the implementation phase is outlined in Table 4: Project Implementation Reporting Schedule. The environmental monitoring plan is

detailed in Table 5: Environmental Monitoring Plan, and the social monitoring plan is specified in Table 6: Social Monitoring Plan

Table 4: Environmental and Social Reporting Schedule

Report	Prepared by	Reviewed by	Frequency
Internal Progress Report	Construction Supervision Company (CSC)	PMO. and QHAMG/PIU	Monthly
External Environmental and Social Monitoring Report (ESMR)	External Environmental Social Monitoring Agency (ESMA)	AIIB	Quarterly in Year 1; semi-annually in subsequent years subject to AIIB approval
Project Progress Report (including internal environment and social performance monitoring).	PIU supported by LIEC and LISC	PMO and AIIB	Quarterly (it shall be adjusted accordingly in line with any changes to the submission frequency of the overall project progress report.)

Table 5: Environmental Monitoring Plan

Project	Monitoring Factor	Monitoring Location	Monitoring Frequency	Compliance standards	Implementing Unit	Supervising Unit	Funding Source
Construction Period							
Internal Monitoring							
Air Quality	Dust control measures, equipment maintenance	Visual inspection at all construction sites	Weekly	China's "Ambient Air Quality Standards" (GB 3095-2012) Class 2 standards and the World Bank Group's "Environmental, Health and Safety (EHS) Guidelines"	Construction Contractor	CSC	200,000 CNY, for project construction phase mitigation measures
Noise	L _{Aeq} : Measured with handheld noise meter	Construction site boundary	At least once per week during peak construction	China's GB " Environmental Quality Standards for Noise " (GB 3096-2008), " Emission Standard of Environmental Noise for boundary of Construction Site " (GB12523-2011), and the World Bank's EHS Guidelines	Construction Contractor	CSC	
Solid Waste	Domestic waste, construction waste, excavated soil, hazardous waste	Visual inspection at all sites	Daily	Construction waste is managed in accordance with the "Qinzhou City Urban Construction Waste Management Measures".	Construction Contractor	CSC	

				The temporary storage facilities for petroleum-based hazardous waste comply with the "Pollution Control Standards for Hazardous Waste Storage" (GB 18597-2023). All entrusted disposal units have the corresponding hazardous waste disposal qualifications for their respective categories.			
Soil and Water Conservation	Soil erosion intensity	Visual inspection at all sites	Weekly especially after heavy rain	/	Construction Contractor	CSC	
	Topsoil	Visual inspection at topsoil stockpiles	Weekly especially after heavy rain	/	Construction Contractor	CSC	
Biodiversity Protection	Animal and plant protection measures, vegetation restoration status	Visual inspection of all construction sites	Weekly	/	Construction Contractor	CSC	
Occupational Health and Safety (OHS)	Site hygiene and safety. Contractor's	Check all sites	Monthly	/	Construction Contractor	CSC	

	goal: emergency plan in place, all workers aware of the emergency plan						
External Monitoring							
Surface Water	pH, COD, BOD ₅ , NH ₃ -N, SS, DO, TP, petroleum	A monitoring section set along the Qinjiang River, the section is near the Shuitsu Dong village nearest to the project.	Quarterly, continuous	<i>Surface Water Environmental Quality Standards (GB 3838-2002) Class III standards.</i>	ESMA	PMO、PIU	600,000 CNY, 3 years, included in environmental and social external monitoring budget
Construction Wastewater	PH, SS, petroleum	Settling pond	Quarterly	<i>Intergrated Wastewater Discharge Standard (GB 8978-1996) Class III standard</i>	ESMA	PMO、PIU	
Air Quality	TSP,PM ₁₀	Downwind sensitive points in the dominant wind direction (e.g., Hengling Village, Laoba Village, Shui Zhindong, Qingtang Village, Lao Village, Ma Xiong Village, Tianyuan Hanlin Zunfu, Tianyuan Hanlin Zunfu Kindergarten, etc.)	Quarterly	China's "Ambient Air Quality Standards" (GB 3095-2012) Class 2 standards and the World Bank Group's "Environmental, Health and Safety (EHS) Guidelines"	ESMA	PMO、PIU	
Exhaust Gas	Particulate matter	Surroundings of the project site boundary	Quarterly	The " Intergrated Emission Standard of Air Pollutants " (GB16297-1996) of China	ESMA	PMO、PIU	
Noise	L _{Aeq}	All construction sites.(In Form	Quarterly, with	" Environmental Quality	ESMA	PMO、PIU	

		VII-1 of the Environmental and Social Impact Assessment Report for this Project (environmental air and noise protection targets during the construction period), the 8 sensitive points include: Hengling Village, Laoba Village, Shuijindong Village, Qingtang Village, Laocun Village, Maxiong Village, Tianyuan Hanlin Zunfu, and Tianyuan Hanlin Zunfu Kindergarten.)	continuous sampling over 2 consecutive days , once during the daytime and once at night on each day	Standards for Noise " (GB 3096-2008), " Emission Standards for Industrial Enterprises Noise at boundary " (GB12348-2008), and the World Bank Group Environmental, Health and Safety Guidelines			
Solid Waste	Domestic waste, construction waste, surplus soil, hazardous waste	All construction sites	Quarterly	Construction waste is managed in accordance with the "Qinzhou City Urban Construction Waste Management Measures". The temporary storage facilities for petroleum-based hazardous waste comply with the "Pollution Control Standards for Hazardous Waste Storage" (GB 18597-2023). All entrusted disposal units have the corresponding	ESMA	PMO、PIU	

				hazardous waste disposal qualifications for their respective categories.			
Soil and Water Conservation	Soil erosion intensity and topsoil restoration status	All construction sites	Quarterly	/	ESMA	PMO、PIU	
Biodiversity Conservation	Fauna and flora protection measures and vegetation restoration status	All construction sites	Quarterly	/	ESMA	PMO、PIU	
Operational Period							
Noise	L _{Aeq}	Seven (7) sensitive points are affected by the entrance trunk road, as identified in Table VII-3 (Operational Phase Noise Protection Targets for the Entrance Trunk Road) of the ESIA Report: Hengling Village, Laoba Village, Shuiyandong Village, Qingtang Village, Maqiong Village, Tianyuan Hanlin Zunfu Residential	Quarterly, with continuous sampling over 2 consecutive days , once during the daytime and once at night on each day	" Environmental Quality Standards for Noise " (GB 3096-2008), " Emission Standards for Industrial Enterprises Noise at boundary " (GB12348-2008), and the World Bank Group Environmental, Health and Safety Guidelines	ESMA	PMO、PIU	The amount of CNY 400,000, covering a period of one year, has been allocated to the external environmental and social monitoring budget.

		<p>Complex, and Tianyuan Hanlin Zunfu Kindergarten.</p> <p>One (1) sensitive point is affected by the logistics park, as identified in Table VII-5 (Operational Phase Noise Protection Targets for the Multimodal Freight Yard and Logistics/Production Facilities Area) of the ESIA Report: Lao Village.</p> <p>One (1) sensitive point is affected by the railway dedicated line, as identified in Table VII-4 (Operational Phase Noise and Vibration Protection Targets for the Railway Dedicated Line) of the ESIA Report: Lao Village.</p>					
Vibration	VLZ _{max}	Sensitive points within 60m of the railway line.(as listed in Table VII-4 of the ESIA :Lao Village)	Quarterly, with sampling conducted during both daytime and nighttime.	" Standard of Environmental vibration in urban area " (GB 10070-1988)	ESMA	PMO, PIU	
Wastewater	COD, BOD ₅ , SS,	Discharge outlets of	Quarterly, with	Integrated Wastewater	ESMA	PMO, PIU	

	NH ₃ -N, animal and vegetable oils, TP	wastewater treatment facilities	sampling conducted over 2 consecutive days	Discharge Standard (GB 8978-1996)			
Exhaust Gas	H ₂ S, NH ₃ , odor concentration, particulate matter	Exhaust stack of the garbage transfer station	Quarterly, over 2-3 consecutive days, with a minimum of 3 samples per day	Emission Standards for Odor Pollutants (GB14554-93) and Intergrated Emission Standard of Air Pollutants (GB 16297-1996)	ESMA	PMO, PIU	
	H ₂ S, NH ₃ , odor concentration, particulate matter	Air pollutant monitoring points within the project boundary (1 upwind, 3 downwind)	Quarterly, over 2-3 consecutive days, with a minimum of 3 samples per day		ESMA	PMO, PIU	
	cooking fumes	Exhaust stack of the restaurant in the intermodal freight yard and comprehensive service center	Annually	Emission Standard for Cooking Fume (On Trial) (GB18483-2001)	ESMA	PMO, PIU	
Solid Waste	Municipal Solid Waste (MSW) and Hazardous Waste	Within project site boundary	Quarterly	The temporary storage facilities comply with the "Standard for Pollution Control on Hazardous Waste	ESMA	PMO, PIU	

				Storage " (GB 18597-2023); all the entrusted disposal units have the corresponding qualifications for hazardous waste disposal.			
Groundwater	pH, COD, NH ₃ - N, total coliform bacteria	A monitoring well set downstream of the logistics and production facilities	once a year	"Standard for Groundwater Quality " (GB/T 14848-2017)	ESMA	PMO, PIU	
Soil and Vegetation	Plant survival rate and coverage, invasive species	All areas where plants are replanted	Quarterly	/	ESMA	PMO, PIU	
Occupational Health and Safety (OHS)	Personal protective equipment, emergency plans, restricted access signs	Project site	Quarterly	/	ESMA	PMO, PIU	

PIU = Project Implementing Unit (Qinzhou Huangma Asset Management Group Co., Ltd.), CSC = Construction Supervision Company, ESMA = Environmental and Social Monitoring Agency

Table 6: Social Monitoring Plan

Stage	Action	Monitoring Indicators	Implementing Entities(IEs)	Budgets and Sources
Construction	Expand participation, decision-making, and consultation	1. Residents in the project area (including the 60 Zhuang individuals) participate in at least 2 decision-making and consultation activities per year, including participation numbers disaggregated by sex.	PMO, PIU., Changtian Sub-district Office, and affected communities/villages in Datong Town	Included in project funding
	Reduce Land Acquisition and Relocation Impacts on project-affected people	2. Conduct full consultations with persons affected by Land Acquisition (including the 11 Zhuang individuals) and HD during project implementation; record the number of consultation sessions and the number of participants among the project-affected people. 3. Handle complaints and grievances from project-affected people, including the number of feedbacks received and the number of complaints resolved. (including the 11 Zhuang individuals)	PMO, PIU, Qinbei District Human Resources and Social Security Bureau, Qinbei District Natural Resources Bureau, Qinbei District Land and Housing Expropriation Center, Changtian Sub-district Office, and the affected communities/villages in Datong Town	Included in project funding

Effectively Mitigate Environmental Impacts on Nearby Residents	<p>4. Residents in the project area participate in public consultation activities during project implementation (including the 60 Zhuang individuals), including the number of consultations and participants (disaggregated by sex); to promptly identify and resolve existing issues.</p> <p>5. Record and track the status of environmental impact complaints received from residents in the project area and their resolution during the construction period. (including the 60 Zhuang individuals)</p>	PMO, PIU, Changtian Sub-district Office, and affected communities and village (residential) committees in Dadong Town, and contractors	Included in the construction budget and daily expenditure budget of relevant government departments
Improve Road Safety	<p>6. Route planning for heavy goods vehicles, including notices for off-peak travel, road signage, detour plans, and notifications on community bulletin boards; distribution locations and photographs of village road signs.</p> <p>7. Resident participation in road safety awareness or training activities, including the number of sessions held, participation rates (disaggregated by sex), and quantities of pamphlets and posters distributed. (including the 60 Zhuang individuals)</p> <p>8. Record of road traffic incidents within the project area during the construction period.</p>	PMO, PIU, Changtian Sub-district Office, and affected communities and village (residential) committees in Dadong Town, Qinbei District Traffic Police Brigade, and contractors	Included in the construction budget and daily expenditure budget of relevant government functional departments
Enhance Infectious Disease Prevention	<p>9. Dissemination and training on public safety and prevention knowledge for HIV/AIDS, STIs, and other infectious diseases, including quantities of pamphlets, posters, and photo albums; number of prevention training sessions and participants. (including the 60 Zhuang individuals)</p>	PMO, PIU, Changtian Sub-district Office, affected communities/villages in Datong Town, Qinbei CDC, and surrounding communities/villages.	Included in the construction budget and daily expenditure budget of relevant

				government functional departments
	Increase employment opportunities	10. Number of jobs created during the project construction phase; disaggregated into skilled and unskilled jobs.	PMO, Qinzhou Huangma Asset Management Group Co., Ltd., and contractors	Include it in the construction budget
	Work Conditions and Health & Safety	11. Development and implementation status of labor management procedures, e.g., signing of labor agreements, enrollment in industrial injury insurance; implementation status of equal pay for equal work for men and women. 12. Safety regulations, rights protection, and infectious disease prevention knowledge dissemination and training activities for construction workers, including types of activities, frequency, and participant numbers. 13. Number of worker complaints/grievances, their resolution status, and feedback provided.	PMO, Qinzhou Huangma Asset Management Group Co., Ltd., Qinbei District Human Resources and Social Security Bureau, Supervisor and contractors	Including in the construction budget and Qinzhou Huangma Asset Management Group Co., Ltd.'s own funds
Operation Stage	Enhancing Road Safety	1. Frequency and severity of road traffic incidents within the project area during the operational phase. 2. Record of complaints received from residents in the project area and their resolution status during the operational phase.	PMO, PIU, affected communities and Village/Neighborhood Committees of Changtian Sub-district and Datong Town	Included in relevant government functional departments' routine operating budgets.
	Increasing Employment	3. Number of jobs created during the project operational phase and the provision of relevant skills training for new employees.	PIU	Covered by PIU's own fund

	Opportunities			
	Working Conditions, Health and Safety	<p>4. Development and implementation status of the project operator's labor management procedures, such as the signing of labor agreements and the implementation of equal pay for equal work for men and women.</p> <p>5. 90% of project personnel receive awareness sessions and training on safety regulations, rights protection, and infectious disease prevention knowledge, including the types of activities conducted, their frequency, and participation numbers.</p> <p>6. Number of worker complaints/grievances and their resolution status.</p>	PMO, PIU, Qinbei District Human Resources and Social Security Bureau	Covered by PIU's own fund
GAP	Increase employment opportunities	<p>1. Number of jobs created during the project construction phase, disaggregated by sex and ethnicity Female employee ratio shall be no less than 20% (Baseline: 0%).</p> <p>2. The target female employment ratio within the project park/zone is set at no less than 30% (Baseline: 0).</p>	PIU, Contractors	Covered by PIU's own fund
	Enhancing women's participation in decision-making	<p>3. Ensure female representation is no less than 40% (Baseline: 20%) in project consultations, information disclosure, and decision-making activities.</p> <p>4. Project information (including construction activities, progress, land acquisition and demolition compensation policies, detour notices, and grievance mechanisms) shall be disclosed in a timely manner, with the target of increasing the information awareness rate among women to 75% (Baseline: 40%).</p> <p>5. Ensure that the participation rate of female representatives in LA and HD consultation activities reaches no less than 40% (baseline: 20%).</p> <p>6. Set up female positions dedicated to gender affairs in project implementation units.</p> <p>7. Develop a female-friendly community within the logistics park by establishing a women's organization and supporting facilities such as a "Women's Home."</p>	PMO, PIU, affected communities and Village/Neighborhood Committees of Changtian Sub-district and Datong Town	Covered by project fund
	Enhancing	8-9. During both the project construction and operation phases, ensure that	PIU	Covered by

	women's development capacity	Women worker account for no less than 90% of participants in training programs covering vocational skills, occupational safety, gender equality, and the prevention of gender-based violence, sexual exploitation, and sexual harassment (baseline: 50%).		construction budget and PIU's own fund
	Mitigating Gender-Based Violence Risks	<p>10. Establish a grievance mechanism accessible to women. Throughout the project implementation period, track and report on the reception and handling of complaints, including the number of feedback entries received, complaints lodged, and complaints resolved.</p> <p>11-12. 100% of female workers receive training on labor rights protection; zero incidents of gender-based violence have occurred.</p>	PMO, PIU, Contractors, affected communities and Village/Neighborhood Committees of Changtian Sub-district and Datong Town, Women's Federation of Qinbei District	Covered by construction budget and PIU's own fund and relevant government functional departments' routine

VI. Grievance Redress Mechanism (GRM)

27. During the preparation, construction, and future operation of the project, in order to understand and address the impacts and issues the project may bring to stakeholders in a timely manner, and to ensure the affected parties' need for information transparency and as broad participation as possible from resettlement areas, a project-level grievance redress mechanism will be established, considering the current situation of complaints and grievances in the project area.

28. The GRM for this project mainly includes two types:

The first is the GRM, established to receive and address complaints from the project-affected people, social organizations, enterprises, institutions, and business entities impacted by project implementation and operations.

The second type is an appeal mechanism for project workers, including direct workers and contract workers, responsible for providing an appeal channel to project employees and others.

A. GRM Arrangement

(1) GRM established for the project-affected people

29. The grievance redress mechanism is mainly established to promptly reflect and resolve the negative impacts caused by the project implementation (e.g., noise at construction sites, dust from construction activities, improper disposal of construction waste, etc.), ensuring the basic social rights of stakeholders. The grievance mechanism of this project complies with the regulatory standards of the People's Republic of China, which protect citizens' rights from construction-related environmental and social impacts. In February 2022, the State Council of the People's Republic of China issued the "Regulations on Petition Work" (hereinafter referred to as "Regulations"), which officially came into effect on May 1, 2022. The new regulations comprehensively standardize the system, responsibilities, procedures, and supervision of petition work, and serve as the fundamental basis for petition work. The new regulations clearly stipulate that citizens, legal persons, or other organizations may use information networks, letters, telephone calls, faxes, or visits to report issues, make suggestions, opinions, or complaints to various government agencies, which should handle them in accordance with the law. In addition, leaders of government agencies at all levels should read letters and online petitions from the public, regularly meet with the public, and visit them regularly, resolving prominent

issues raised by the public and ensuring petitioners can express their opinions and demands smoothly and receive fair treatment. No organization or individual is allowed to retaliate against petitioners. On December 15, 2010, the Ministry of Environmental Protection of the People's Republic of China issued Order No. 15, the "Regulations on the Management of Environmental Protection Hotlines," further standardizing environmental protection hotline management and ensuring smooth channels for public complaints, thereby better protecting the legal environmental rights of the people. These regulations also established a complaint handling mechanism for all levels of government and protected complainants from retaliation. Furthermore, as the current regulations on ecological environment petition work are mainly based on the "Petition Regulations" issued by the State Council in 2005 (which has been abolished), in order to further advance the rule of law in ecological environment petition work and regulate the order of petitions, the "Measures for Petition Work on Ecological Environment (Draft for Comments)" and its drafting explanation were publicly released for feedback in October 2024. The GRM is established to promptly identify and mitigate adverse impacts arising from project implementation (e.g., construction noise, dust, waste disposal), ensuring effective protection of stakeholders' social rights. In compliance with China's regulatory frameworks, including the Petition Work Regulations implemented by the State Council in May 2022 and the Environmental Complaint Hotline Management Measures, this project has instituted accessible grievance channels for project-affected people. The project-affected people may submit feedback, suggestions, or complaints through: Digital platforms (official website/email); Written correspondence (mail/fax); Hotline communications; In-person visits to guarantee timely resolution of legitimate concerns.

30. Upon receiving a complaint, the head of the project management office should first verify whether the complaint is related to the project. If the complaint is project-related, the head should initiate coordination to resolve the issue, regardless of whether it concerns environmental, social, or other issues. If the complaint is unrelated to the project, the head should submit the complaint to the relevant authorities. All complaints should be recorded, and the entire process should be communicated to the relevant parties. The basic steps and time framework for the grievance mechanism are as follows:

31. **Phase One (5 calendar days):** If the complainant is dissatisfied with land acquisition compensation and resettlement plans or with safety and environmental issues during the construction and operation periods, they may file a complaint orally or in writing to the village committee of the project area or the contractor. If the complaint is made orally, the village committee or contractor should make a written record. The village committee or contractor should: (1) immediately request the complained party to stop the relevant activity (e.g., noise impact from construction on nearby residents); (2) prevent the complained

party from resuming activities until the complaint is resolved; (3) immediately report the complaint content and proposed solution to Qinzhou Huangma Asset Management Group Co., Ltd.; (4) provide a clear response to the affected party within two days; (5) resolve the issue, if possible, within five days of receiving the complaint.

32. **The contractor** should inform in writing by providing a report to Qinzhou Huangma Asset Management Group Co., Ltd. at all stages. After receiving notification from the contractor, Qinzhou Huangma Asset Management Group Co., Ltd. should notify in writing the project management office, the township government, and the environmental protection department, etc., within one working day. Subsequently, these parties will be informed at all stages.

33. **Phase Two (5 calendar days):** If the issue cannot be resolved in Phase One, after five calendar days, Qinzhou Huangma Asset Management Group Co., Ltd. will take over the responsibility. Qinzhou Huangma Asset Management Group Co., Ltd. will: (1) retrieve the original complaint record and within two days, organize a meeting with key stakeholders (including the complained party, complainant) to develop an acceptable solution with clear steps to resolve the issue; (2) the complained party should immediately implement the resolution and solve the issue within three days. All measures and results should be documented.

34. If the solution is agreed upon by the complainant, the contractor and/or facility operator (during operation) will implement the solution within five calendar days after Qinzhou Huangma Asset Management Group Co., Ltd. takes over the complaint responsibility. All stages and results will be documented in writing. At the end of Phase Two, Qinzhou Huangma Asset Management Group Co., Ltd. (PIU) will notify the project management office of the result.

35. **Phase Three (15 calendar days):** If Qinzhou Huangma Asset Management Group Co., Ltd. cannot determine a solution, and/or the complainant is dissatisfied with the proposed solution, the project management office will organize a stakeholders' meeting (including the complainant, the complained party, local departments such as the Natural Resources and Planning Bureau, the Relocation Office, the Human Resources and Social Security Bureau, Qinbei District ethnic and religious affairs bureau, Women's Federation, Agriculture and Rural Affairs Bureau, Environmental Protection Bureau, Water Resources Bureau, Forestry Bureau, and other relevant departments) within seven calendar days to determine a mutually acceptable solution with clear steps. The contractor (during construction) and facility operator (during operation) will immediately implement the agreed-upon solution. Every effort should be made to resolve the issue completely within

15 calendar days. All stages and results will be documented. At the end of Phase Three, the project management office will report the results to the Asian Infrastructure Investment Bank (AIIB).

36. **Phase Four:** If the complainant is still dissatisfied with the decision made in the previous phases, they may, within the time specified after receiving the decision, file a lawsuit in a civil court according to the "Civil Procedure Law of the People's Republic of China."

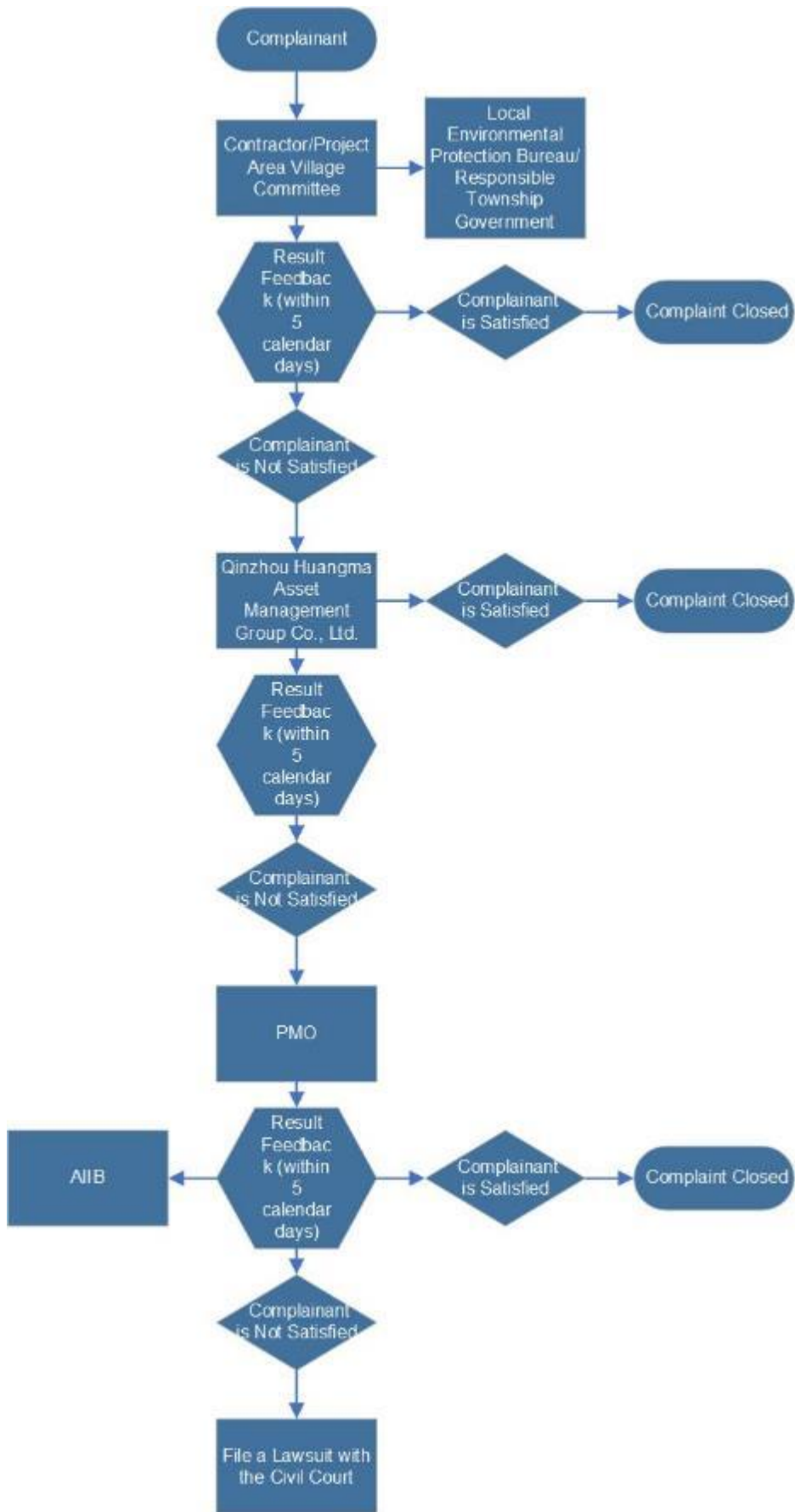


Figure 1: Complaint Mechanism Workflow

(2) GRM for workers

37. A separate GRM will be established to handle complaints raised by workers working on construction sites to contractors. These complaints include issues related to wages, overtime pay, timely wage payments, accommodation, or facilities related to drinking water, sanitary conditions, and medical services.

38. In the management of GBV/SEA/SH, the PIU will rely on the guidance and coordination of the Project Management Office and the Women's Federation of Qinbei District. During project implementation or operation, the project implementation agency, contractors, etc., shall, in accordance with the "Law of the People's Republic of China on the Protection of Women's Rights and Interests," "Special Provisions on the Labor Protection of Female Workers," "Regulations on the Health Care of Female Workers," "Special Labor Protection System for Female Workers in the Workplace," and "Regulation on Eliminating Sexual Harassment in the Workplace" and other laws and regulations, sign labor (employment) contracts with female workers, ensure equal pay for equal work, and take effective measures such as appointing a special officer to protect women's rights to prevent and stop sexual harassment in the workplace.

39. Additionally, a rapid response mechanism will be established for female workers and women in the project area to lodge complaints or suggestions related to GBVSEA/SH. If female workers experience sexual harassment or any other behavior that endangers their personal safety in the workplace, the victim can immediately report or file a complaint to the employer, local Women's Federation, Women's Workers Committee, or dial the "12338" Women's Rights Protection Public Service Hotline. The employer should handle the issue promptly and legally protect the rights of female workers.

40. In addition, the Asian Infrastructure Investment Bank (AIIB) has established a feedback mechanism for people affected by the project (PPM). When project-affected people believes that the AIIB project has failed to implement its Environmental and Social Policy (ESP) and is or may cause adverse impacts on them, and their concerns cannot be satisfactorily resolved through the project's grievance redress mechanism (GRM) or the AIIB management system, the PPM provides an independent and fair review opportunity. Information related to the PPM can be accessed via the following link: <https://www.aiib.org/en/about-aiib/who-we-are/project-affected-peoples-mechanism/how-we-assist-you/index.html>.

B. Records and Tracking Feedback of Grievances and Appeals

41. During the implementation of the Environmental and Social Management Plan, all

points of entry for the grievances must properly register and manage complaint data and handling results, reporting them in writing to Qinzhou Huangma Asset Management Group Co., Ltd. once a month. Qinzhou Huangma Asset Management Group Co., Ltd. will regularly review the registration of complaint handling and ensure timely communication with the project management office regarding handling progress, reaching consensus on suggestions.

42. To fully document grievances from Project-affected Persons (PAPs) and related handling matters, the PMO has developed a Resettlement Grievance Registration Form. The form permits petitioners to submit grievances anonymously. The sample format is provided in Table 7.

Table 7:Grievance Registration Form

Receiving Unit			
Grievant		Grievant's Contact Information	
Grievance Type		Date	
Grievance Details:			
Handling Result by Receiving Unit:			
Grievant Satisfaction Level:			
Responsible Person		Contact Information	

Data Source: Records of all complaint cases accurately and promptly resolved, archived for future reference and statistical analysis.

C. Contact Information for Expressing Grievances and Appeals

43. The project implementation agency will designate a primary responsible person specifically to receive and handle grievances and appeals from affected populations and other stakeholders. The name, office address, and phone number of the designated

responsible person are shown in Table 8. After the bidding process is completed, contractors and Construction Supervision Companies need to confirm their environmental and social responsible person as the contact for the grievance redress mechanism. The contact information (telephone number, address, email address) will be publicly displayed on the information boards at construction and operational sites.

Table 8: Personnel Responsible for Grievance Handling

No.	Place of work	Position	Name	Contact Information
1	Qinbei District Development and Reform Bureau (PMO)	Deputy Director	Chen Xianjian	0777-3686982
2	Qinbei District Development and Reform Bureau (PMO)	Cadre	Liang Shengxin	0777-3686982
3	Qinzhou Huangma Asset Management Group Co., Ltd.	Division manager	Wang Junying	0777-2558060
4	Qinzhou Huangma Asset Management Group Co., Ltd.	Staff member	Huang Kaijie	0777-2558017
5	Qinzhou Huangma Asset Management Group Co., Ltd. (Full-time staff responsible for Social and Resettlement affairs)	Staff member	Wei Shaofang	0777-2558005
6	Qinzhou Huangma Asset Management Group Co., Ltd. (Full-time staff responsible for Social and Resettlement affairs)	Staff member	Liang Haoning	0777-2558017
7	Qinbei District Land and Housing Acquisition Center	Deputy Director	Zhan Xu	18278184566
8	Qinbei District Ethnic and Religious Affairs Bureau	Director	Wu Jun	13877777928
9	Women's Federation	Director	Zhou Qiuxia	13907870707
10	Changtian Sub-district Office	Cadres of the Land Acquisition and Relocation Office	Huang Kaiyu	18907871158
11	Huangma Community	Deputy Secretary of the Branch	Huang Guanghui	18977737905
12	Chengbei Community	Branch Secretary	Zhang Jiahe	13197779190
13	Longwan Community	Branch Secretary	Liang Jiahua	18977767519
14	Dadong Town Government	Director of	Huang	18077764323

		Land Acquisition and Relocation Office	Yuntang	
15	Hengling Village	Village branch secretary	Lin Siguang	13457727492
16	Jiangbiao Community	Community branch secretary	Guo Jingzhi	13517770826

Data source: PIU

VII. Document Management and Reporting Mechanism

A. Record-Keeping Mechanism

44. To ensure the effective operation of the environmental management system, a robust record-keeping mechanism must be established to retain records in the following areas:

(1) Relevant laws and regulations;

(2) Government-issued permits;

(3) Relevant environmental and social impacts;

(4) Training records;

(5) Monitoring data;

(6) Issues in environmental management, environmental protection, and social management work;

(7) Mitigation measures and their effectiveness;

(8) Other project-related information;

(9) Records of project document reviews.

45. Additionally, the above records should be managed comprehensively, including identification, collection, archiving, storage, maintenance, inquiry, retention period, and record disposal.

B. Reporting Mechanism

46. Qinzhou Huangma Asset Management Group Co., Ltd. shall document the project situation during implementation and create the "Environmental and Social Management Plan Implementation Report" (PIMR), reporting to relevant authorities in a timely manner.

47. The Environmental and Social Management Plan Implementation Report may include the following main contents, with the final content to be determined after discussion with the AIIB:

① Project progress status;

② Implementation status of the environmental and social management plan;

③ Implementation status of the training plan;

④ Implementation status of the environmental social monitoring plan;

⑤ Public participation activities and the functioning of the grievance mechanism. If complaints occur, record the main content of the complaint, the solutions, and public satisfaction;

⑥ Issues encountered during construction and operation, and the actions taken.

48. In the event of any incident or accident related to the project that has caused or may cause significant adverse impacts on the environment, affected communities, the public, or workers—including but not limited to SEA, SH, and accidents resulting in fatalities, severe injuries, or multiple casualties—the PMO shall: i) notify AIIB within 48 hours of becoming aware of the occurrence; ii) provide detailed information on the scope, severity, and probable causes; iii) outline immediate remedial actions taken or planned; iv) submit all available relevant documentation from contractors and/or supervision consultants v) prepare and submit an incident investigation report within an AIIB-agreed timeframe, proposing corrective and preventive measures to address the incident and mitigate recurrence risks.

VIII. Cost Estimate

49. This section provides an estimate of the costs associated with the implementation of the Environmental and Social Management Plan (ESMP). The costs are categorized into three types: mitigation measures, monitoring, and training. The listed costs cover the entire construction period and the first year of operation, totaling six years. The costs do not include: (i) revisions and adjustments to detailed designs; (ii) internal monitoring/inspection of solid waste disposal, soil erosion, vegetation restoration, and OHS during construction, as these will be included in the construction supervision contract; (iii) salaries of project personnel from the Construction Contractor. (iv) The costs incurred during land acquisition and resettlement will be reflected in the resettlement plan budget, including: Land acquisition compensation fees (land compensation fees; compensation for young crops; ground attachments); Residential housing demolition compensation fees (building structure compensation; relocation allowances; temporary transition fees; ancillary structures); Statutory charges (cultivated land occupation tax; cultivated land reclamation fees; new construction land use fees; land acquisition administration fees; social security funds for expropriated land); and other costs (survey and design fees; implementation management fees; external monitoring fees; skill training fees; contingency fees). The costs for mitigation measures and training are based on estimates from the Environmental and Social Impact Assessment and/or the experience of consultants from other similar projects. All costs have been discussed with Qinzhou Huangma Asset Management Group Co., Ltd (PIU).

50. Estimated costs for the implementation of the Environmental and Social Management Plan for five years of construction and the first year of operation (in ten thousand CNY). Costs during the construction phase will be borne by the contractor (as part of the contract). Costs during the operational phase will be covered by Qinzhou Huangma Asset Management Group Co., Ltd (PIU).

Table 9: Cost Estimation for the Implementation of the Environmental and Social Management Plan

No.	Item	Cost (10,000 CNY)	Source
1	Training and Capacity Building	20	Included in the total investment estimation of feasibility study under "Other Engineering Construction Costs", borne by the PIU.
2	Environmental and Social Consultant during Loan Implementation Period	60	
3	Mitigation Measures during Construction Phase	120	These include baffles, water sprinkling systems, construction materials covers, drainage ditches, noise barriers, traffic signs, and other controls, included in the total investment estimation of feasibility study under "Engineering Costs," borne by the construction contractor.
4	Mitigation Measures during Operation Phase	370	The construction of soundproofing windows, oil separators, septic tanks, and initial rainwater collection tanks at waste transfer stations will be included under "Engineering Costs" in the Feasibility Study's total investment estimation and borne by the construction contractor. Costs for canteen fume purification equipment and deodorization systems at waste transfer stations will be covered by the PIU during the operational phase.
5	External Environmental and Social Monitoring Fees	240	The cost will be included in the "external environmental and social monitoring costs" under "Other Engineering Construction Costs" category of the total investment estimation and borne by the PIU. (This does not include resettlement monitoring costs; resettlement monitoring costs are budgeted under the RP and borne by the PIU.)
6	Other Unforeseen Costs	70	Included in the total investment estimation under "Contingency" in the feasibility study, this provision primarily covers unforeseen or emergent expenditures that could not be accurately estimated in advance during implementation, including but not limited to: cost overruns due to policy adjustments; unanticipated natural conditions; technical modifications; ESHS (Environmental, Social, Health and Safety) emergency measures; contingency protocols for chance discoveries of cultural relics.
Total		880	

IX. Feedback and Adjustment Mechanism

51. The PMO shall determine, based on the occurrence of material changes to the project, whether:(i) additional mitigation measures or corrective actions are required; and (ii) amendments to the ESMP necessitate implementation.

52. If, during inspections and monitoring, the project is found to deviate significantly from the ESMP ,or if any changes are made to the project that could cause significant adverse environmental and social impacts or increase the number of affected people, the PMO shall immediately consult with the AIIB and form an environmental and social assessment team for additional environmental and social assessments. If necessary, further public consultation will be conducted. The revised ESIA (including this ESMP and RP) will be submitted to AIIB for review, evaluation, clearance and public disclosure. The revised ESMP will be handed over to the contractor for strict compliance and implementation.

Appendix 1. Labor Management Plan (LMP)

I. Basis and Purpose of Preparation

The LMP of this project was prepared based on the relevant labor requirements in the ESF of the AIIB and its ESS 1, with reference to the Environmental, Health and Safety (EHS) Guidelines of the International Finance Corporation (IFC) and the World Bank Group, and in combination with the current labor laws and regulations of China and the Guangxi Zhuang Autonomous Region.

The LMP of this project aims to standardize labor management activities throughout the entire process of the China-ASEAN Sea-Rail Multimodal Logistics Project, clarify the types of workers and their scope of application, ensure that workers' legitimate rights and interests, OHS management are effectively protected, prevent and mitigate labor management risks, and establish a smooth grievance mechanism. Through a complete legal framework, management system and risk prevention and mitigation measures, we ensure the legitimate rights and interests and OHS of workers throughout the project, comply with national regulations and the AIIB ESSs, and regularly evaluate and dynamically update based on actual operation conditions to promote the protection of workers' rights and interests and sustainable social development.

II. Scope of Application

This LMP applies to all workers involved in the construction and operation phases of this project, including:

1. Direct Workers: Personnel directly employed by the PMO (Qinbei District Development and Reform Bureau) and the project implementation/operating entity (Qinzhou Huangma Asset Management Group Co., Ltd.), including project management staff, finance personnel, administrative staff, and operations and maintenance personnel.
2. Contractor Workers: Personnel employed by construction contractors or subcontractors for activities such as construction, transportation, and installation.
3. Primary supplier workers: Personnel employed by agents, manufacturers (e.g.), and suppliers of procured goods and equipment (such as photovoltaic equipment).

The project construction phase primarily involves direct workers and contractor workers, while the operational phase mainly involves direct workers and supplier workers.

III. Labor Management Risk and Impact Analysis

Through preliminary social assessments and stakeholder interviews, combined with the project's operational characteristics, the following key risks have been identified:

Table 1: Potential Risks and Impacts Related to Laborer Identification

Phase	Worker Type	Potential Risks and Impacts
Construction Phase	Direct Workers	A robust worker management and supervision system has been established, minimizing risks.
	Contractor Workers	Risks include construction machinery operation safety, falls from heights, struck-by objects, dust and noise exposure, non-standard labor contracts, working hours and conditions, etc.
Operation	Supplier Workers	LWC risks at the supply chain level, such as excessive overtime and low wages; OHS risks, such as inadequate protective equipment.
	Direct Workers	Potential risks include labor contract fulfillment, OHS management, working hours and conditions, etc.

IV. Labor Management Policies and Legal Basis

The project will strictly comply with current laws and regulations of China and the Guangxi Zhuang Autonomous Region concerning labor employment, social security, and occupational safety and health, including but not limited to:

Table 2: Applicable Laws and Regulations for Labor Management

No.	Law/Regulation	Effective/Revision Year	Remarks
1	Labor Law of the People's Republic of China	2024	Establishes the fundamental rights of workers and the obligations of employers, serving as the overarching legal basis for labor protection.
2	Labor Contract Law of the People's Republic of China and its Implementing Regulations	2013	Clarify the procedures for the conclusion, performance and termination of labor contracts, require the signing of written contracts, and prevent illegal employment.
3	Law of the People's Republic of China on the Prevention and Control of Occupational Diseases	2023	Regulates occupational hazard prevention, monitoring, and diagnosis, applicable to processing, cold chain, warehousing, and high-temperature/high-altitude operations.
4	Special Provisions on the Protection of Female Workers	2012	Protects the labor rights of women during pregnancy, childbirth, and lactation, requiring improved working conditions and prevention of occupational hazards.
5	Social Insurance Law of the People's Republic of China	2018	Establishes the social insurance system (old-age, medical, work-related injury, unemployment, and maternity insurance) to safeguard the lawful rights of workers.
6	Law of the People's Republic of China on Work Safety	2021	Clarify the safety responsibilities of production and operation units, requiring the implementation of safety training, hazard identification, and accident emergency management.
7	Workers' Compensation Insurance Regulations	2011	Standardizes the procedures for work injury recognition and compensation, ensuring workers receive lawful compensation following accidents.
8	Labor Dispute Mediation and Arbitration Law of the People's Republic of China	2008	Establishes mediation and arbitration mechanisms for resolving labor disputes, applicable to project appeals and dispute resolution.
9	Implementation Plan for the Vocational Skills Improvement Initiative (2019–2025)	2019	Encourages employers to provide skills training for employees to enhance occupational safety and health capabilities.
10	Law of the People's Republic of China on the Prevention and Treatment of Infectious Diseases	2020	Applies to the prevention of external pathogen contamination in the cold chain food and agricultural product sectors.
11	Fire Protection Law of the People's Republic of China	2019	Establishes mandatory fire safety requirements for warehouses, logistics facilities, photovoltaic equipment rooms, and supporting infrastructure.
12	Regulations on the Reporting, Investigation, and Handling of Production Safety Accidents	2019	Establishes accident reporting, investigation, and accountability systems, serving as the legal basis for emergency management.
13	Regulations on Labor Security Supervision of the Guangxi Zhuang	2010	Strengthen local labor supervision and enforcement, imposing penalties for wage arrears, illegal employment practices, and

	Autonomous Region		other violations.
14	Measures for the Implementation of the Law on the Protection of Women's Rights and Interests in the Guangxi Zhuang Autonomous Region	2024	Strengthen regional-level gender equality policies and enforcement mechanisms to ensure equal employment opportunities for women.
15	Guangxi Minimum Wage Regulations	2016	Employers must pay wages no less than the minimum wage standard to ensure workers' basic livelihood.

Project implementation agencies, contractors and suppliers should strictly abide by national laws and regulations, ensure that all workers sign labor contracts in accordance with the law, and that wages, working hours and vacations comply with national standards. The use of child labor and forced labor is strictly prohibited, and workers' rights to equal employment and safe work are effectively guaranteed, gender equality is maintained, and any form of discriminatory employment practices are eliminated.

V. Labor Employment and Contract Management

Project implementation agencies, construction units and operating units should strictly abide by national labor regulations and the AIIB ESSs, standardize labor and employment management, and ensure the legitimate rights and interests of workers. include:

- ① Ensure that all hired employees, including temporary employees, sign labor and labor contracts in accordance with the law. The contract must clearly define the work content, construction period, salary standards, working hours, insurance benefits, labor conditions, occupational health protection measures and grievance mechanisms, and fully purchase accident insurance for workers through a third-party company.
- ② The salary standard of project employees shall not be lower than the minimum wage standard of the Guangxi Zhuang Autonomous Region, and must be paid in full monthly. Any form of arrears or deductions is strictly prohibited. Working hours should comply with national legal standards; if overtime is really necessary, workers' consent should be obtained in advance and overtime wages should be paid in accordance with the law.
- ③ During the recruitment process, social responsibilities should be actively fulfilled, priority should be given to absorbing local labor force, and appropriate preference should be given to women, low-income groups and other disadvantaged employment groups to promote community employment and local economic development. All employment links must strictly follow the principles of openness, fairness, and transparency. Discrimination based on gender, ethnicity, religion, age, health status, or marital status is prohibited, and equal employment opportunities are guaranteed.
- ④ It is strictly prohibited to employ persons under the age of 16; workers under the age of 18 are not allowed to work in hazardous positions. Resolutely put an end to any form of bonded labor and involuntary labor. Once illegal employment is discovered, the employment relationship will be terminated immediately and remedial measures will be taken.
- ⑤ Require major suppliers to regularly submit labor management due diligence reports, covering aspects such as contract management, prohibition of child labor, equal pay for equal work, anti-gender discrimination and anti-forced labor.
- ⑥ In the bidding and procurement documents of contractors and major suppliers, clearly incorporate labor management requirements into contract terms, including labor contract signing, wage payment, social insurance payment, OHS, and gender equality, and establish a third-party performance management and monitoring mechanism to ensure the effective implementation and comprehensive compliance of the system.

VI. Labor Working Conditions (LWC)

To ensure the well-being of the workforce during project implementation, the project must provide safe and healthy working and living conditions for all workers during both the construction and operational phases.

- ① The construction site should be equipped with safe drinking water, sanitation facilities, adequate rest areas and dormitories that meet regulations to meet the basic living needs of workers.
- ② The contractor shall keep the workplace clean and orderly and provide workers with necessary labor protection equipment.
- ③ Appropriate sanitary facilities and living conveniences should be provided according to the special needs of female workers, and their privacy and safety should be effectively guaranteed.
- ④ The project owner, supervision unit and construction contractor should clarify their respective responsibilities in terms of labor condition management, regularly inspect the safety and health conditions of living areas and workplaces, and accept the supervision of the project management office and relevant competent authorities.

To reduce management risks for suppliers in labor and working conditions (LWC), the project will implement the following measures:

- ⑤ Require major suppliers to regularly submit self-examination reports on labor conditions, covering aspects such as employment compliance, wage payment, working hours, safety and security, and prohibition of child labor.
- ⑥ Conduct annual reviews and on-site labor condition verification on suppliers identified as high risk.
- ⑦ Clarify LWC compliance clauses in procurement contracts, and blacklist suppliers who seriously violate labor regulations.
- ⑧ Strengthen communication with relevant enterprises such as photovoltaic equipment manufacturing, transportation and cold chain equipment supply to ensure that their operations comply with AIIB standards and Chinese laws and regulations.

VII. Occupational Health and Safety (OHS) Management

In order to ensure the occupational safety and health of the workforce during project construction and operation, the PIU will establish a complete OHS management system, with a full-time environmental and social specialist in charge. The construction unit will set up a full-time safety supervisor to implement daily safety inspections, training and monitoring responsibilities. The main management and risk prevention and control measures include:

- (1) System and responsibility system. Establish a project OHS management system, clarify the division of responsibilities of implementing units, construction contractors and subcontractors, and ensure the implementation of responsibilities at all levels.
- (2) Safety supervision mechanism. The construction unit sets up a full-time safety management post to be responsible for on-site safety inspection, hidden danger investigation and rectification closed-loop management.
- (3) Security meeting mechanism. Regularly hold regular safety production meetings to systematically report and track the effectiveness of safety risks and the implementation of prevention and control measures.
- (4) Occupational health and safety (OHS) training. Implement pre-job and on-the-job safety education covering the construction and operation periods, including fall prevention,

electric shock prevention, mechanical injury prevention, chemical leakage response, and first aid knowledge.

(5) Special training for special operations. Implement special training for personnel engaged in key positions such as high-altitude operations, electrical operations, photovoltaic maintenance, and cold chain operations, and strictly implement the certification system.

(6) Personal protective equipment equipping. The construction unit equips the operators with qualified personal protective equipment in accordance with national specifications, including safety helmets, protective shoes, safety belts, goggles, gloves, hearing protection and reflective vests.

(7) High-altitude and electrical work protection. Fall prevention devices, insulation tools and safety ropes are set up in high-altitude and electrical work areas to ensure the safety of operators.

(8) Operating environment control. Ensure good ventilation and lighting at the construction site, and effectively control noise, dust and harmful gas exposure levels.

(9) Emergency preparedness and medical cooperation. The site is equipped with emergency medicines and emergency equipment, and an emergency liaison mechanism has been established with Qinbei District People's Hospital to ensure that the accident response channel is smooth.

(10) Emergency drills and response. Regularly organize emergency drills to simulate fires, electric shocks, chemical leaks, falls from heights and other scenarios to improve emergency response capabilities; Implement emergency response procedures for work-related injuries to ensure that information reporting, rescue and compensation are in place in a timely manner.

(11) Special operation protection. Implement health and epidemic prevention and special protection measures in cold chain, warehousing and processing operation areas.

(12) Environmental sanitation management. Strengthen the clean management of construction areas and living areas, and implement sanitized measures and garbage classification systems.

(13) Safety measures for photovoltaic system operation and maintenance. The project builds a 17.7MW distributed photovoltaic system on the rooftop, and its operation and maintenance involves risks such as high-altitude work and electrical operation, and the following prevention and control requirements must be strictly implemented in daily operation and maintenance: (1) operation and maintenance personnel must complete special training for high-altitude work and hold a certificate; (2) standardize the use of safety ropes, double-hook safety belts, anti-fall guardrails and anti-slip channels during operation; (3) Implement electrical grounding testing, line insulation inspection and power outage permit management to strictly prevent electric shock accidents; (4) In case of bad weather such as high temperature and thunderstorms, stop outdoor high-altitude work immediately; (5) Eye-catching safety warning signs are set up at the operation and maintenance site, and first aid materials and communication equipment are equipped.

VIII. Gender Equality and Prevention of Gender-Based Violence (GBV) and Sexual Exploitation/Abuse (SEA/SH)

In order to ensure the safety of female employees and all labor forces, project implementation and all contractors and suppliers must strictly abide by national laws and the AIIB's ESF, implement a zero-tolerance policy, and prevent and respond to all forms of GBV and SEA/SH. The main management requirements are as follows:

(1) Comply with national labor laws and regulations, abide by the principle of equal opportunities, and strictly prohibit any form of discrimination against women, disabled

people, migrant workers, and young people with legal service age in the recruitment and employment process. During the implementation of the project, the protection of the rights and interests of female employees will be fully implemented, ensuring that the centralized office area is equipped with safe drinking water, sanitary facilities and rest areas, and setting up sanitary facilities for men and women to ensure privacy and basic hygiene needs.

(2) In terms of gender equality and prevention of sexual harassment, the project unit will formulate a special system to clarify prohibited behaviors and corresponding punishment measures, and set up a full-time environmental and social management person to supervise the implementation. All contractors, subcontractors and suppliers must implement sexual harassment prevention and gender equality measures, and incorporate relevant content into daily management training to ensure that all construction personnel are covered, covering topics such as vocational skills, production safety, gender equality and sexual harassment prevention. Regularly organize systematic training for project managers and workers on gender equality, gender-based violence and sexual exploitation/harassment (GBV/SEA/SH) prevention, and post promotional materials in office and accommodation areas.

(3) At the same time, we will effectively ensure that female employees enjoy equal rights in recruitment, promotion, benefits, pregnancy and maternity leave, provide a safe and hygienic working and living environment for female workers, and protect the legitimate rights and interests of pregnancy and lactation in accordance with the law.

(4) With the assistance of PIU and local functional departments, provide training on OHS, gender equality and anti-sexual harassment, labor rights, and infectious disease prevention and control to project management personnel, contractors, and workers; and distribute propaganda posters, leaflets, etc. to workers.

(5) Establish a confidential and secure GBV/SEA/SH grievance mechanism at the project level, set up a full-time grievance recipient, ensure smooth complaint channels, timely and professional handling process, respect privacy, and allow anonymous grievances. In addition, establish a collaborative network with local women's federations, public security agencies, and legal aid organizations to provide victims with psychological counseling, legal support, and medical assistance.

IX. Grievance Redress Mechanism (GRM)

The project will establish a multi-level grievance channel to ensure that workers, affected residents, and other stakeholders can express their concerns and receive responses in a fair and timely manner.

Appeal mechanism for those affected by the project: mainly for public demands caused by construction noise, dust, vibration, land acquisition and demolition, etc.;

Worker Grievance Mechanism: for employees of direct workers, contractors and suppliers to reflect on labor rights, occupational health, safety, etc.; in addition, in collaboration with the Women's Federation of Qinbei District and grass-roots women's organizations, to set up a confidential and independent complaint channel and response mechanism for gender-based violence (GBV) and sexual exploitation/sexual harassment (GBV/SEA/SH).

The project complaint handling procedures include: the first-level (within 5 days) village committee or contractor receives the complaint and records it and preliminarily handles it; the second level (within 5 days) PIU organizes meetings, coordinates solutions and executes; The third-level (within 15 days) Project Management Office (PMO) jointly holds a hearing with relevant functional departments to put forward final handling opinions and report to the AIIB; If the complainant is still not satisfied, he can file a lawsuit with the people's court in accordance with the Civil Procedure Law of the People's Republic of China.

Record and track feedback: All appeals need to be registered and filed; The PIU

summarizes the acceptance and handling of complaints every month and reports them to the Project Management Office (PMO) for the record; The monitoring agency tracks and monitors the results of complaint handling in external evaluations; Anonymous complaints are allowed and information is kept confidential and non-retaliation.

External channels: Affected parties may submit an application directly to the AIIB's project-affected people Mechanism (PPM) when they believe that the project has not complied with the AIIB's Environmental and Social Framework (ESF) and has caused substantial damage, and has not been satisfactorily resolved through the Grievance Mechanism (GRM). The website of PPM as follow: <https://www.aiib.org/en/about-aiib/who-we-are/project-affected-peoples-mechanism/how-we-assist-you/index.html>

X. Training and Capacity Building

To ensure effective implementation of the project's Environmental and Social Management Plan (ESMP) and enhance the management and implementation capabilities of project stakeholders, the PMO and Qinzhou Huangma Asset Management Group Co., Ltd. (PIU) will establish a systematic institutional capacity building and training mechanism.

The training objectives are to improve project execution staff's understanding of the AIIB's Environmental and Social Framework (ESF) and regulations in PRC; to enhance the management and operational capabilities of contractors, supervision and operation and maintenance teams in environmental, social, health and safety (EHS); and to promote the effective implementation of gender equality, social inclusion and grievance handling mechanisms.

Main training contents:

1. Training on the implementation of environmental and social management plan, including subject responsibilities, supervision and inspection, public participation and reporting requirements.
2. Occupational health and safety (OHS) management: OHS principles, correct use of personal protective equipment (PPE) and emergency response during the construction and operation periods.
3. Social management and gender equality: implementation of gender action plans, gender violence, sexual exploitation/sexual exploitation (GBV/SEA/SH) risk prevention and control, and labor management.
4. Environmental protection and climate adaptation: pollution prevention and control during construction, ecological restoration, biodiversity and climate change response.
5. GRM operation: complaint acceptance, recording and feedback process and information confidentiality requirements.

The training is organized and implemented by the Loan Implementation Environmental Consultant (LIEC) and the Social Consultant; participants include the PMO, PIU, contractors, supervision companies and relevant management personnel of the operating unit; training and evaluation are organized at least once a year, and special training is added when necessary; training records are included in the project archives and are subject to review by the project's external monitoring agency and the AIIB.

XI. Monitoring and Reporting

To ensure effective implementation of labor working conditions and OHS measures outlined in the LMP, the project will implement a monitoring and reporting mechanism during both the construction and operation phases. Contractors are responsible for daily on-site supervision and record-keeping, with supervision units conducting reviews. The PIU will coordinate management and regularly compile reports. Monitoring will cover key indicators including labor contract execution, wage disbursement, working hours,

occupational safety, training implementation, and grievance mechanism operation.

The project has established both internal and external monitoring mechanisms. Contractors submit monthly reports on labor working conditions and OHS to the PIU, with the supervising unit reviewing compliance and corrective actions. The PIU commissions an independent third-party external monitoring agency to conduct periodic external assessments, focusing on labor condition compliance, worker accommodation and safety, protective training, and grievance handling effectiveness, and provides improvement recommendations based on these assessments.

In the event of a major accident, worker injury or death, or gender-based violence (GBV) incident, the PIU must report to the Project Management Office (PMO) and the AIIB within 24 hours, and submit a detailed investigation and correction report to ensure continuous improvement of labor safety and social compliance.

XIII. Responsibilities and Funding

The PMO is responsible for the overall management and coordination of the project; Qinzhou Huangma Asset Management Group Co., Ltd. is responsible for the specific implementation; each contractor and supplier implements various action measures on the safety management, labor security and occupational health of contractor workers in the ESMP in accordance with the requirements of the contract. Relevant costs are included in the project management and implementation budget, and the contractor includes expenditures on OHS-related measures in construction and operating costs.

Appendix 2. Risks and preventive measures of GBV/SEA/SH

a. GBV/SEA/SH Risk Analysis

The proposed activities of this project include construction of Logistics and production facilities, Multimodal freight yard, supporting facilities in the park (including the entrance trunk road and Road infrastructure) etc. The construction phase involves a large labor force, posing a potential risk of GBV/SEA/SH to female workers and women in the surrounding communities.

The Chinese and Guangxi governments have already established comprehensive regulations to prevent the risk of SEA/SH, with local authorities increasing law enforcement efforts continually. According to data provided by the Women's Federation of Qinbei District, Qinbei District has one rescue (shelter) institution for abused women and children, providing assistance to a total of 40 people. The judicial authorities have provided legal aid to 17 women and judicial assistance to 14 women. Moreover, Qinbei District has healthcare service institutions (community hospitals, maternal and child healthcare hospitals), judicial service agencies (community police stations, public security bureaus, district courts), and social service providers (district legal aid centers, district women's federations, community female cadres). These institutions can support the project in addressing potential cases of SEA/SH and assist in preventing such incidents. Therefore, the risk of SEA/SH for the project is assessed as low.

b. Legal Framework

China and Guangxi Zhuang Autonomous Region have specific laws and regulations to protect women's labor rights, including the prohibition of SH. Local governments have developed corresponding action plans and require government agencies, enterprises, and institutions within their jurisdiction to strictly adhere to these regulations.

Table 1 Policies, laws, and regulations related to women

Category	Laws and regulations	Effective time	Remarks
China	Law of the People's Republic of China on the Guarantee of the Rights and Interests of Women	Revised and effective from January 1, 2023	The recent revision signifies the fundamental formation of China's legal system for safeguarding women's rights and promoting gender equality, marking a new leap forward in the legal protection of women's rights in the new era.
	Special Regulations on Labor Protection for Female Employees	Revised and effective from April 28, 2012	This regulation aims to mitigate and address the specific difficulties faced by female employees in the workforce due to their physiological characteristics, thereby safeguarding their health. It encompasses the protection of rights and interests for female employees during pregnancy, maternity leave, and breastfeeding periods, including the reduction of workload, arrangement of adequate rest periods, calculation of time for prenatal check-ups, duration of maternity leave, as well as the payment of maternity allowances and medical expenses. Furthermore, this regulation not only applies to female employees who have established labor relations with employing units but also extends to female workers dispatched through labor agencies, as well as part-time female employees who have signed labor contracts or have formed de facto labor relations, ensuring that a broader spectrum of women can benefit from corresponding labor protections.
	Law of the People's Republic of China on the Protection of the Minors	Revised and effective from April 26, 2024	This revision involves adjustments to the organization, coordination, guidance, and supervision of the protection of minors, especially in Article 9 which clarifies the responsibilities and roles of people's governments at all levels in the protection of minors. This indicates that the protection of minors has been further strengthened and regulated at the legal level.
Guangxi	Measures for the	Revised and	This revision involves multiple aspects, including modifications to existing regulations, addition of new

Zhuang Autonomous Region	Implementation of the Law of the People's Republic of China on the Protection of Women's Rights and Interests in Guangxi Zhuang Autonomous Region	effective from March 28, 2024	provisions, and adjustment of the order of articles, aiming to better meet the current needs of women's rights protection and ensure that women's rights in various fields are fully protected. The revised regulations have made specific provisions to safeguard the rights and interests of women in education, labor, social security, and other areas, in order to ensure that women can enjoy equal rights and opportunities with men.
	Guangxi Zhuang Autonomous Prefecture implements special regulations on labor protection for female workers	Revised and effective from April 28, 2012	In order to reduce and address the special difficulties faced by female employees in the workplace due to their physiological characteristics and to protect their health, it has implemented the "Special Provisions on Labor Protection for Female Employees." This regulation was adopted at the 200th executive meeting of the State Council and promulgated for implementation on April 28, 2012. It applies to employers and their female employees within the territory of the People's Republic of China, including state organs, enterprises, public institutions, social organizations, individual economic entities, and other social organizations. Employers are required to strengthen labor protection for female employees, take measures to improve their working safety and health conditions, and provide them with training on labor safety and health knowledge. Additionally, employers must adhere to the regulations on the scope of work prohibited for female employees and are prohibited from reducing their wages, dismissing them, or terminating their labor or employment contracts due to pregnancy, childbirth, or breastfeeding. These provisions aim to ensure that the rights and interests of female employees in the workplace are fully protected, promoting gender equality and safeguarding their well-being in the labor force
City and district level	Qinbei District Women and Children Development Plan (2021-2030)" (BZF [2022] No. 8)	Implemented from December 28, 2022.	The formulation of this plan is designed to further advance the high-quality development of women's and children's initiatives in Qinbei District, reflecting a commitment to protecting the rights and interests of women and children and promoting their comprehensive development. The background, guiding principles, fundamental tenets, and overarching objectives of the plan all focus on advancing women's and children's causes. It aims to enhance the health standards of women and children, optimize

			<p>educational services, strengthen social security, and promote gender equality and the protection of women's rights through a series of targeted measures. Notably, the plan emphasizes specific actions such as improving the maternal and child health service system, optimizing healthcare environments for women and children, and enhancing elderly care service facilities. These measures are intended to ensure that women and children benefit from greater welfare and security amid social and economic progress. The plan underscores the district's dedication to integrating equity, inclusivity, and sustainability into policies that empower women and safeguard children's well-being, aligning with broader national goals for gender equality and social development.</p>
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C. Mitigation Measures

Considering the potential GBV/SEA/SH risks associated with the project's affected population, even though these risks are low, to prevent and address the impact of such risks, this framework will establish corresponding mitigation measures, such as raising awareness among the community and other stakeholders and strengthening institutional capacity.

Table 2 GBV /SH Risk Management Plan

S/ N	Specific Actions	Responsible Entity	Implementation Time	Monitoring Indicators	Source of Funds	Monitoring Time and Frequency
1	Organize GBV/SEA/SH risk training to enhance the sensitivity of PMO and PIU in this regard.	PMO, Huangma Company, social advisors	Throughout all project cycles	Relevant personnel of PMO and PIU are aware of GBV/SEA/SH risk factors in the project area and have received training on how to prevent and respond to GBV/SEA/SH. Frequency of training sessions and the number of participants.	Project consulting fees	During the implementation period of the project, a quarterly report will be submitted in the first year. After being evaluated and approved by the AIIB, a semi annual report will be submitted starting from the second year
2	Collaborate with the local women's Federation to establish a GBV/SEA/SH complaint handling mechanism specific to the project to address potential GBV/SEA/SH incidents during project implementation. Provide training for personnel responsible for complaint handling, including appropriate documentation of complaint registration and management, as well as maintaining the confidentiality of SEA/SH complainant information.	PMO, Huangma Company, social advisors	Throughout all project cycles	Personnel responsible for complaint handling are in place; GBV/SEA/SH complaint records; frequency of training sessions and the number of participants.	Supporting funds for project execution agencies	During the implementation period of the project, a quarterly report will be submitted in the first year. After being evaluated and approved by the AIIB, a semi annual report will be submitted starting from the second year
3	Construction contractors shall develop a GBV/SEA/SH Behavior Management Policy and	Contractors	During the construction period	Number of management personnel and workers who have received training or awareness	Contractor's own funds	During the implementation period of the project, a quarterly report will be submitted in the first year. After being evaluated and

	ensure that construction workers clearly understand the requirements outlined in the policy.			campaigns on the management policy.		approved by the AIIB, a semi annual report will be submitted starting from the second year
4	Commit to complying with GBV/SEA/SH requirements in the tender documents. Include GBV/SEA/SH clauses in the construction contract, specifying detailed requirements and penalties.	PMO, Huangma Company, social advisors, and contractors	During the procurement and contract signing	Relevant GBV/SEA/SH requirements or clauses are included in the tender documents and construction contracts.	Supporting funds for project execution agencies	During the implementation period of the project, a quarterly report will be submitted in the first year. After being evaluated and approved by the AIIB, a semi annual report will be submitted starting from the second year
5	The execution of GBV/SEA/SH related actions will be included in external M&E	PMO, Huangma Company, social advisors, and contractors and ESMA	Project implementation period	Submitted external monitoring report	Project consulting fees	During the implementation period of the project, a quarterly report will be submitted in the first year. After being evaluated and approved by the AIIB, a semi annual report will be submitted starting from the second year

Appendix 3: Procedures for Accidental Discovery of Cultural Relics

The Cultural Relics Protection Law of the People's Republic of China (PRC) stipulates that all cultural relics found in the underground, inland waters, and territorial seas of the PRC are owned by the state. Any cultural relics found in the underground, inland waters, territorial seas, or other locations that are concealed or not reported to the state, will result in a warning or fine by the public security authorities, and the illegally obtained cultural relics will be confiscated. Therefore, any unit or individual discovering cultural relics or relic sites must immediately report it to the local cultural relic protection department at the county level. The county-level cultural relic protection department will promptly organize relevant experts to conduct an on-site investigation. If cultural relics are discovered during construction, the responsible construction must immediately stop construction and protect the site.

To address this issue, the following procedures are established for handling the discovery of material cultural resources during the construction phase. Upon discovery, the procedures will be immediately initiated:

1. Immediate Protection of the Site: Any unit or individual discovering cultural relics must immediately stop work and take measures to protect the site, preventing further damage or loss of the relics. Until professional personnel arrive, the construction unit should maintain the site as much as possible in its original condition and avoid moving or damaging the relics in any way.

2. Report to the Local Cultural Relics Administrative Department: Upon discovery of cultural relics, the discovery should be immediately reported to the Qinzhou Bureau of Culture, Radio, Film, Television, Sports, and Tourism (which has a Cultural Relics Protection Department). Contact number: 0777-3687600. Upon receiving the report, the Cultural Relics Protection Department of the Qinzhou Bureau of Culture, Radio, Film, Television, Sports, and Tourism should arrive at the site within 24 hours and take appropriate measures according to the need for cultural relic protection.

3. Handling by the Cultural Relics Administrative Department: After receiving the report, the cultural relics administrative department should quickly organize experts for on-site research and propose handling suggestions. If important relics are found, the department should notify the Qinzhou Municipal People's Government to instruct the public security authorities to assist in protecting the site.

4. Cultural Relics Protection Measures: During the protection process, public security authorities should maintain order at the site and prevent looting, private division, concealment, or damage of cultural relics. Since cultural relics belong to the state, no unit or individual is allowed to loot, privately divide, or conceal them.

Appendix 4: Summary of Contractor Responsibilities During Project Implementation

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
Construction Preparation Phase				
Environmental and Social	Institutional Strengthening	Arrange appropriate environmental and social security personnel, ensure the implementation of the management plan, and cooperate with external environmental and social monitoring.	<p>(1) Ensure sufficient funds and human resources are allocated throughout the entire construction phase to implement the mitigation measures and monitoring plans specified in the Environmental and Social Management Plan (ESMP), and guarantee the normal operation of the grievance mechanism during the construction period;</p> <p>(2) Cooperate with the internal and external environmental and social monitoring teams designated by Qinzhou Huangma Asset Management Group Co., Ltd. in conducting regular inspections, monitoring, and data collection during the implementation of the construction project;</p> <p>(3) The Contractor shall designate at least one full-time personnel (who may also serve as a safety officer concurrently) to overall take charge of the implementation of environmental and social management measures during the construction process, including specifically:</p> <p>①Implementation of environmental and social impact mitigation measures and monitoring plans during the construction period;</p> <p>②Formulation, public announcement, and result feedback of the grievance mechanism for workers and residents in surrounding communities;</p> <p>③File management of the implementation results of environmental and social impact mitigation measures, monitoring, and grievance handling during the construction process;</p> <p>④Timely notification of sudden environmental and social incidents occurring during the construction process;</p>	/

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
			⑤ Cooperation with external environmental and social monitoring institutions in conducting monitoring, evaluation surveys, and data collection on the implementation of the Environmental and Social Management Plan (ESMP).	
	Establish GRM	Project-Affected People, Workers	<p>During the construction of the project, to promptly understand and address the impacts and issues brought to stakeholders by the project construction, and to meet the information disclosure and feedback channel needs of affected parties, the Contractor shall establish a grievance mechanism, which mainly includes:</p> <p>(1) Project-level Grievance Mechanism: A grievance channel provided for affected residents, social organizations, enterprises and public institutions, business operators, and other entities during the project construction period. It serves as a channel for grievances related to environmental, health, safety, land acquisition and resettlement impacts caused by construction activities.</p> <p>(2) Project Workers' Grievance Mechanism: A grievance channel provided for workers and employees of all positions working on the project. It offers a channel for construction workers to file grievances regarding rights and interests protection, such as salaries, working conditions, living conditions, occupational health and safety, and protection of vulnerable groups (including workplace sexual harassment).</p> <p>(3) AIIB Project-Affected People's Mechanism (PPM): The Asian Infrastructure Investment Bank (AIIB) has established the Project-Affected People's Mechanism (PPM). When project-affected people believe they have been or are likely to be adversely affected due to AIIB's failure to implement its Environmental and Social Policy (ESP), and their concerns cannot be satisfactorily addressed through the Project-level Grievance Redress Mechanism (GRM) or AIIB Management's processes, the PPM provides an opportunity for independent and impartial review.</p>	/

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
			<p>Relevant information about the PPM can be obtained by visiting the following link: https://www.aiib.org/en/about-aiib/who-we-are/project-affected-peoples-mechanism/how-we-assist-you/index.html.</p> <p>The Contractor shall formulate clear systems for the acceptance, response, and feedback of grievances, and publicly disclose the acceptance channels of project grievances as well as the AIIB Project-Affected People's Mechanism (PPM) and its feedback channels.</p>	
Environmental	Greenhouse Effect		<p>The refrigerant uses environmentally friendly refrigerants, and the selected refrigerant for the unit has an Ozone Depletion Potential (ODP) of 0 and a Global Warming Potential (GWP) of less than 150. The currently selected refrigerant type is NH₃+CO₂ cascade system. If the refrigerant type is updated, a type with an ODP of 0 and a low GWP will be selected.</p>	Complies with domestic and EU standards
	Solar PV Impact		<p>The design utilizes monocrystalline silicon solar panels. These panels employ low-iron tempered glass with a transmittance of approximately 93%-94.5% and a reflectivity controlled below 8%. The surface of monocrystalline silicon modules typically features matte or textured treatments, resulting primarily in diffuse reflection, which scatters reflected light energy and reduces interference caused by localized light intensity concentration. The photovoltaic modules are installed facing south at a 15° tilt angle, optimized for Qinzhou's solar exposure. This configuration directs reflected light to scatter upward rather than directly toward ground-level sensitive areas such as residential buildings or roads, thus avoiding significant light pollution. Regular cleaning removes dust, bird droppings, and other contaminants from the panel surfaces to prevent the "localized mirror effect" that could intensify</p>	/

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
			reflections. If nearby residents report glare disturbances, on-site inspections are conducted promptly to adjust the panel angles or install simple shading measures (e.g., adding light-blocking strips along the edges)	
Construction Phase				
Environmental	Ecology	Soil and Water Conservation	<p>(1) All sand and gravel materials will be purchased from external suppliers. During construction, the contractor should ensure that the sand and gravel suppliers have the proper mining permits, and the contracts for purchasing these materials should specify the responsibilities for soil and water conservation. No spoil or waste material disposal sites will be set up.</p> <p>(2) Before construction, the topsoil should be stripped and transported to a temporary stockpile site for centralized storage. Temporary barriers, drainage, and sedimentation measures should be installed around the stockpile area.</p> <p>(3) Considering the long construction period, temporary grass seed broadcasting and protective covering measures should also be applied in the topsoil storage area.</p> <p>(4) During construction, temporary drainage, sedimentation, and covering measures should be implemented. Water diversion ditches should be placed on the slopes. After construction is completed, topsoil should be restored, and slope protection should be implemented with grass turf.</p> <p>(5) The central median or side strips of the roadbed should be restored with topsoil and planted with trees, shrubs, and grass, followed by maintenance and nurturing.</p> <p>(6) Drainage pipes should be laid under the road, permeable bricks should be used for sidewalks, and grass paving bricks should be used in parking lots.</p> <p>During underground construction, water diversion measures using woven bags filled with soil should be implemented.</p>	/

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
			(7) Signboards and warning signs: Water and soil conservation publicity boards and warning signs should be placed at the entrances and exits of the construction site.	
		Biodiversity	<p>(1) If protected plants, such as the Cibotium barometz, are discovered at the construction site, the project management department should be consulted for protection measures. If there are numerous trees at the construction site, and ancient trees over 100 years old or trees marked for protection by local forestry departments are found during construction, the project management department should be consulted for their protection. Protected plants should be transplanted to a similar environment. Prior to transplantation, the reproductive methods of the species should be investigated, and reproduction methods should be established in advance to ensure successful transplantation.</p> <p>(2) Among the trees that need to be felled, priority should be given to transplanting protected tree species, followed by transplanting younger trees.</p> <p>(3)It is strictly prohibited to fell trees outside the land-use area. Forestry fire prevention education should be strengthened, and fire warning signs should be placed around the construction area. Emergency measures for forest fire control should also be prepared.</p> <p>(4) Permanent and temporary land occupation areas should retain arable soil or topsoil to provide good soil for vegetation. The topsoil from permanently or temporarily occupied farmland, forest land, etc., should be collected and preserved for later re-cultivation and vegetation restoration.</p> <p>(5)Excavation for various pipelines should avoid rainy days. The excavation width of the pipeline trench should follow design specifications, and temporary soil piles at the trench sides should be covered. After pipeline installation, backfilling should be</p>	/

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
			<p>carried out according to relevant standards, and vegetation should be restored after construction.</p> <p>(6) For compensatory measures for permanent occupation of forest land, the principle of local and nearby restoration should be followed. Restoration sites should fully utilize forest clearings, existing suitable forest land, and barren hills and slopes. The number of trees restored should be no less than the area of the occupied forest land. Vegetation restoration should be carried out under the guidance of local forestry departments.</p> <p>(7) The selection of tree species for landscaping should consider local climate conditions and native species, with an emphasis on consistency with surrounding vegetation. Tree species such as Qingtan, Soybean trees, and Ren-dou should be considered, as well as shrubs like Gray-furred Tree of Heaven and Tiger Thorn, and herbaceous plants like Five-segmented Reed, Bamboo-leaf grass, and Common Reed. The use of alien invasive species listed by China, such as Bidens and Parthenium, is strictly prohibited. Landscaping should be completed as quickly as possible to avoid prolonged exposure, which may provide opportunities for the invasion of alien species. The landscape design should follow the structure of trees, shrubs, and grasses, with a diverse range of species to avoid large-scale monoculture plantations. The goal is to improve resistance to the invasion of alien species.</p> <p>(8) Publicize wildlife protection regulations and raise construction personnel's awareness of conservation. Hunting of wild animals is strictly prohibited.</p> <p>(8) Efforts should be made to minimize disturbance from mechanical noise to nearby protected bird species and regulate construction behavior. (9) Construction personnel are prohibited from hunting. Wild birds are mostly active at dawn, dusk, or nighttime,</p>	

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
			<p>with midday being their rest time. Breeding periods for birds and fish are generally from April to July. Construction methods should be controlled to avoid disturbing wildlife during their activity and breeding periods.</p> <p>(10) Efforts should be made to avoid using high-noise machinery during the evening and night to prevent light and noise from adversely affecting mammals.</p>	
	Air Quality	Construction Dust	<p>(1) A progressive phased construction method should be adopted, with the length of excavation operations not exceeding 1,000 meters at one time, minimizing the area of earthworks and exposed ground.</p> <p>(2) Exposed ground (including earthworks) should be covered. More than 80% of the area of each exposed surface should be covered, and the coverage effectiveness must be at least 90%. The coverage measures include steel plates, dust nets (or cloth), greening, or other equally effective coverage methods.</p> <p>(3) Construction enclosures around villages and residential areas should have a height of no less than 2.5 meters. In other areas, the enclosures should be at least 1.8 meters high. The bottom of the enclosures should have a protective base at least 20 cm high to prevent dust from spilling out. The enclosures must be made of hard materials such as metal, concrete, or plastic. No gaps larger than 0.5 cm should exist between two adjoining enclosure panels or between the enclosure and the protective base. The enclosures must not have significant holes or damage.</p> <p>(4) Dust-prone materials should be covered. All dust-generating materials such as sand, gravel, lime, and mortar must be completely covered with waterproof dust cloths or placed in enclosed areas with cover on the top and sides. The dust cloths or enclosures must be in good condition, with a coverage effectiveness of over 95%. This does not apply to small amounts of material used within 8 hours.</p>	<p>Integrated Emission Standard of Air Pollutants (GB 16297-1996)</p>

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
			<p>(5)The construction site should designate a person responsible for cleaning, with watering equipment provided for regular dust suppression and cleaning.</p> <p>(6)The main roads, processing areas, and living and office areas on the construction site should be hardened. Roads used for vehicle traffic should be paved with concrete to meet vehicle safety requirements and should be free of damage. At all times, there should be no visible dust on the traffic roads. Watering measures must be taken when cleaning roads.</p> <p>(7)A vehicle washing facility should be installed. A designated person should be responsible for washing and cleaning to ensure that vehicles do not carry mud out of the site. Before vehicles leave the site, wheels, bodies, and cargo compartments should be cleaned or washed to ensure vehicles are clean before hitting the road. Vehicles transporting earth, waste, or other dust-generating materials should be sealed or covered.</p> <p>(8)When loading and unloading construction waste or dust-prone construction materials, spraying water, using wet operations, covering, or other dust suppression methods should be implemented to effectively control dust emissions.</p>	
		Construction Waste Gas	<p>(1)Strengthen the control of air pollution from construction machinery by using non-road mobile machinery that is registered with information codes in Qinzhou City and meets emission standards. The use of high-emission non-road mobile machinery is strictly prohibited. The use of construction machinery that emits black smoke and has high emissions (including excavators, loaders, graders, pavers, rollers, forklifts, etc.) is prohibited at all construction sites. Priority should be given to using non-road mobile machinery that meets the Stage IV emission standards in China's "Emission Limits for Exhaust Pollutants from Diesel Engines of Non-Road Mobile Machinery" or new</p>	

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
			<p>energy non-road mobile machinery.</p> <p>(2) Sign disposal contracts or direct-use agreements with transportation and construction waste disposal units, ensuring that qualified transportation units are used for the transportation of construction waste, earth, sand, and gravel. Closed transportation should be implemented.</p>	
	Sound Environment	Construction Noise	<p>(1) Special attention will be given to the six natural villages, one community, and one kindergarten (total population: 1,865 people) within a 200-meter radius of the construction site. This will include:(a) Consulting with community representatives before the commencement of any work to clarify the exact project start date and schedule, the nature of the project, equipment used, safety measures, and public access routes around the site during construction;(b) Installing sound barriers to minimize emissions as much as possible;(c) Agreeing on the daily working hours for the project.</p> <p>(2) Construction should be prohibited during the hours of 22:00–06:00.</p> <p>(3) Use low-noise machinery or equip machinery with soundproofing devices. Ensure that regular repairs and maintenance are conducted to keep the equipment in good working condition and minimize noise.</p> <p>(4) Install temporary soundproof barriers or enclosures around noisy equipment to isolate the noise.</p> <p>(5) When working near noisy equipment (e.g., piling), provide construction workers with appropriate hearing protection (earmuffs).</p> <p>(6) Horns should not be used unless absolutely necessary, and whistles should be used as sparingly as possible.</p> <p>(7) High-noise activities (e.g., crushing, concrete mixing) should be carried out at least</p>	Emission Standard of Environmental Noise for boundary of Construction Site (GB12523-2011)

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
			<p>1 kilometer away from sensitive locations.</p> <p>(8)Special care should be taken when construction sites are near schools or other sensitive locations. If construction activities are unavoidable during school terms, the use of heavy machinery should be limited to weekends and non-school hours.</p> <p>(9)Regularly monitor noise levels in areas that are sensitive to disturbances. If noise exceeds standards, check the equipment and construction conditions, and take mitigation measures to correct the situation.</p> <p>(10)Conduct regular face-to-face interviews with residents near the project to identify noise disturbances. Community feedback will be used to adjust the working hours of noisy machinery.</p> <p>(11)Consult with local residents to develop a construction plan, scheduling activities that are most likely to generate noise and vibration during the day to minimize disruption. Trash bins will be set up at the construction site for waste collection, and local sanitation departments will regularly collect and dispose of it.</p> <p>(12)Use noise control devices, such as temporary soundproof barriers or enclosures during impact or crushing activities, and install mufflers on internal combustion engines.</p> <p>(13)Avoid or minimize transportation of materials through community areas.</p>	
	Water Environment	Construction Wastewater	<p>(1)Settle construction wastewater in sedimentation ponds. After treatment, the wastewater can be reused for dust suppression on-site, as well as for cleaning machinery and vehicles. The solid waste in the sedimentation pond, once dried, can be used as backfill material.</p> <p>(2)Cover the topsoil stockpiles, material storage areas, and other such sites. Install drainage ditches around the sites, and set up sedimentation tanks in low-lying areas.</p>	/

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
			<p>Surface runoff should be treated through sedimentation before being reused. Any wastewater that cannot be reused should be discharged into the municipal sewage system only after approval from the relevant authorities. Discharging wastewater containing a significant amount of mud or untreated wastewater into the municipal sewer system or water bodies is strictly prohibited.</p> <p>(3) Fuel, engine oil, and other hazardous substances should be stored in safe areas with impermeable surfaces and equipped with oil absorption and cleaning facilities.</p> <p>(4) The project will not set up a construction camp. Workers will rent nearby residential houses. Sufficient toilets will be provided near the construction site, and domestic wastewater will be treated in septic tanks and regularly transported to the sewage treatment plant.</p> <p>(5) The arbitrary disposal of construction waste into rivers is strictly prohibited. During culvert construction, machinery must be well-maintained to avoid malfunctions such as leaks or spills. If a malfunction occurs, the equipment should be prohibited from use; if a malfunction occurs during use, the equipment should immediately return to the shore for repair. For machinery that cannot be moved, if leakage is detected, containers should be used to collect the waste, which should then be transported back to the shore for proper handling.</p>	
	Solid Waste	Household Waste	Set up garbage bins at construction sites, collected by local sanitation departments.	Regular collection
		Construction Waste	The construction unit must comply with the relevant provisions of the Construction Waste Management Regulations, recycle usable materials, and entrust the disposal of unusable materials to a qualified construction waste transportation unit for delivery to the Construction Waste Disposal Site.	Qinzhou City Urban Construction Waste Management

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
		Hazardous Waste	Formulate a hazardous waste management plan. Set up a temporary hazardous waste storage area at the construction site to classify and store hazardous waste, and entrust a qualified third-party company with the transportation and proper disposal of hazardous waste."	Regulations The storage area should meet the requirements of the " Standard for Pollution Control on Hazardous Waste Storage " (GB 18597-2023). The entrusted disposal units must have the appropriate hazardous waste disposal qualifications.
		Waste Soil and Rock	After comprehensive utilization of earth and stone materials in the project, no waste materials will be generated.	/
		Occupational Health and Safety (OHS)	(1) Compliance with domestic OHS regulations: Adhere to relevant standards such as the General Specifications for Safety, Hygiene, and Occupational Health on Construction and Municipal Construction Sites, comply with the Occupational Exposure Limits for Hazardous Factors in the Workplace, the Directory of Occupational Diseases, the Catalogue of Occupational Hazard Factors, and the Environmental and Hygiene Standards for Construction Sites. Establish a regular	/

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
			<p>monitoring system for occupational diseases and health hazards.</p> <p>(2) Establish a sound construction supervision and management system: Set up construction safety supervisors on-site.</p> <p>(3) Regular OHS training for workers: Organize training on OHS and emergency response regularly. Develop emergency preparedness and response plans for accidents and emergencies, clearly outlining reporting procedures. This includes environmental and public health emergencies related to hazardous material leaks and similar incidents. Establish an emergency hotline with the Qinbei District People's Hospital of Qinzhou City, where the project area is located.</p> <p>(4) Construction site hygiene:(a) Provide the site with clean and sufficient fresh water;(b) Each contractor should provide good sanitary conditions, adequate toilet facilities, and waste management with classification;(c) Effectively clean and disinfect the site. During land leveling, spray phenolic water for disinfection. Disinfect toilets and trash bins, ensuring regular cleaning of solid waste;(d) Conduct rodent control activities at least once every three months and mosquito and fly control activities at least twice a year;(e) In accordance with labor management and health department requirements, provide public toilets in the construction site living area (if any), and hire dedicated personnel for cleaning and disinfection;(f) Discharge construction site wastewater into the municipal sewage system or use mobile systems for on-site treatment.</p> <p>(5) Occupational safety:(a) Provide all construction workers with personal protective equipment (PPE) that meets Chinese national standards (safety helmets and shoes, high-visibility vests, and safety harnesses for working at height), and strictly require all workers to wear PPE;(b) Provide goggles, gloves, and respiratory masks for</p>	

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
			<p>workers doing interior decoration work;(c) Provide earplugs for workers operating machinery or working near machinery.</p> <p>(6) Disease prevention and health services: The following disease prevention measures and health services should be implemented:(a) Construction workers should undergo a medical examination before starting work on-site. If any infectious diseases are found, the affected individuals must be immediately isolated and treated to prevent disease spread;(b) As per the Construction Site Environmental and Hygiene Standards, the site should be equipped with basic first aid equipment, including common medicines, tourniquets, bandages, disinfectants, stretchers, etc.:(c) Provide all workers with basic training on hygiene, health, safety, and construction hazards. Implement an HIV and infectious disease protection program for workers and the local community. Focus on promoting OHS issues for all staff, and display prominent awareness materials at the construction site;(d) Establish a record management system to store and maintain relevant records to prevent loss or damage. These records include documentation and reports of occupational accidents, diseases, and incidents. The records will be reviewed during compliance monitoring and audits.</p>	
	Cultural Heritage		<p>Establish corresponding procedures for handling material cultural resources discovered during the construction phase. Once material cultural resources are found, the procedure should be immediately activated.</p> <p>(1) Immediately protect the site: Any unit or individual who discovers cultural relics should immediately stop construction and take measures to protect the site, preventing further damage or loss of the relics. Before professionals arrive, the construction unit should try to maintain the site as it is and avoid moving or damaging</p>	Cultural Heritage Protection Law

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
			<p>the relics in any way.</p> <p>(2) Report to the local cultural relics administrative department: After discovering cultural relics, the find should be immediately reported to the Qinzhou City Bureau of Culture, Radio, Television, Sports, and Tourism (which includes the Department of Cultural Heritage Protection, contact number: 0777-3687600). Upon receiving the report, the Bureau should arrive at the site within 24 hours and take appropriate measures based on the needs of cultural relics protection.</p> <p>(3) Handling by the cultural relics administrative department: After receiving the report, the cultural relics administrative department should promptly organize experts to conduct research and propose handling recommendations. If important cultural relics are discovered, the Qinzhou City People's Government should notify the public security authorities to assist in protecting the site.</p> <p>(4) Cultural relics protection measures: During the cultural relics' protection process, the public security authorities should maintain order at the site and prevent looting, illegal distribution, concealment, or damage of the cultural relics. If the relics are found to be state-owned, no unit or individual is allowed to loot, privately divide, or conceal them.</p>	

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
Social	Expand participation, decision-making, and consultation		<p>(1) Throughout the project design and implementation, the PMO, PIU, and contractors will ensure the timely, transparent, and widespread disclosure of project information—including project objectives, progress, and potential environmental and social impacts—through multiple channels such as village bulletin boards, social media, and government websites. This will ensure the public is fully informed of project developments.</p> <p>(2) During the entire project design and implementation process, the PIU, together with affected towns, villages, and communities, will regularly organize public participation in decision-making and consultation meetings (including the 60 Zhuang individuals). These meetings will broadly solicit opinions from residents and affected groups (including the 11 Zhuang individuals), fully safeguarding the public's right to know, to participate, and to express their views. Reasonable suggestions will be incorporated into project design and implementation, ensuring an open and transparent management process.</p> <p>(3) In public engagement activities, emphasis will be placed on increasing the participation of vulnerable groups such as women and low-income populations. Their opinions and suggestions will be fully considered, and information will be disseminated using easy-to-understand and accessible methods, such as illustrated publicity materials, on-site explanations, and interactive discussions, to ensure their input is fully heard and taken into account in the project.</p>	/
	Reduce the risk of land acquisition and demolition		Land acquisition and housing demolition compensation and resettlement measures shall be implemented in strict accordance with the requirements outlined in the prepared and approved RP, with particular attention to vulnerable groups to ensure all project-affected people receive reasonable compensation and proper	

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
			resettlement. In order to mitigate the impacts of LA and HD and restore the living standards of the project-affected people, a detailed Livelihood Restoration Plan has been formulated.	
	Community Healthcare and Safety	Environmental impact	<p>(1) Prior to the commencement of construction, the construction schedule, safety measures, and traffic management plan shall be communicated to residents and institutions (such as schools) within 200 meters of the construction area, and their feedback shall be solicited. During the construction period, continuous communication shall be maintained, with regular updates on progress and timely responses to residents' concerns.</p> <p>(2) Low-noise equipment shall be used on-site. Temporary noise barriers or enclosures shall be installed around noisy machinery to mitigate noise transmission. Night-time construction hours shall be restricted, and advance notice shall be provided to residents if essential work is required.</p> <p>(3) Dust suppression measures, including regular water spraying, shall be implemented in the construction area. Dust barriers and nets shall be erected, and enhanced sweeping and cleaning shall be conducted. Vehicle wheel washing facilities shall be installed at exits to prevent the spread of dust.</p> <p>(4) Dedicated waste storage areas shall be established, with regular collection and transport of waste to designated, compliant disposal sites. Domestic waste shall be handed over to the municipal sanitation department for unified treatment.</p> <p>(5) The construction footprint shall be strictly controlled to avoid damage to surrounding vegetation and ecosystems. Ecological restoration shall be promptly carried out upon completion of construction activities.</p>	/
		Traffic Safety	(1) Construction vehicle routes shall be properly planned to avoid sensitive areas	

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
		Risks	<p>such as schools and residential neighborhoods where possible. Heavy vehicles are strictly prohibited during peak hours. When passing through such areas, vehicles must reduce speed and refrain from honking.</p> <p>(2) Speed limits, no-honking signs, warning signs, and safety barrier facilities shall be installed in construction zones. Night-time lighting shall be added to ensure the safety of residents.</p> <p>(3) All drivers of transport vehicles must receive safety training, strictly adhere to speed limits, and ensure regular vehicle maintenance. Loads shall be properly secured and covered with tarps to prevent spillage, ensuring safe and civilized transportation.</p> <p>(4) Public awareness campaigns on traffic and railway safety shall be strengthened through various channels, including community bulletin boards, media, distribution of pamphlets, and community meetings. This aims to enhance safety awareness and risk prevention capabilities, particularly among vulnerable groups such as women, the elderly, and children.</p> <p>(5) Construction information, including progress and traffic detour notices, shall be promptly released to the community. Public participation shall be enhanced through continuous communication with residents, actively addressing and resolving their concerns.</p>	
		Impacts of Migrant Workers on Local Communities	<p>(1) Awareness and training sessions on the prevention and control of infectious diseases (such as HIV/AIDS, STIs, and others) shall be conducted for residents in the project area through community notices, informational materials, and training sessions to enhance their prevention awareness.</p> <p>(2) Contractual documents with contractors shall explicitly include requirements for</p>	

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
			<p>worker health education and disease prevention and control. Awareness and training on the prevention of HIV/AIDS, STIs, and other infectious diseases shall be strengthened for all workers through the distribution of materials, posted posters, and organized training sessions to enhance their prevention awareness.</p> <p>(3) Proactive communication shall be maintained with village and community representatives in the project area. Construction management and worker pre-employment training shall emphasize respect for local customs and traditions to prevent unnecessary conflicts between migrant workers and local residents.</p>	
	Worker Working Conditions and Occupational Health & Safety		<p>(1) Establish and improve a labor contract management system:</p> <p>① Ensure that all hired employees, including temporary employees, sign labor and labor contracts in accordance with the law. The contract must clearly define the work content, construction period, salary standards, working hours, insurance benefits, labor conditions, occupational health protection measures and grievance mechanisms, and fully purchase accident insurance for workers through a third-party company.</p> <p>② The salary standard of project employees shall not be lower than the minimum wage standard of the Guangxi Zhuang Autonomous Region, and must be paid in full monthly. Any form of arrears or deductions is strictly prohibited. Working hours should comply with national legal standards; if overtime is really necessary, workers' consent should be obtained in advance and overtime wages should be paid in accordance with the law.</p> <p>③ During the recruitment process, social responsibilities should be actively fulfilled, priority should be given to absorbing local labor force, and appropriate preference should be given to women, low-income groups and other disadvantaged employment</p>	

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
			<p>groups to promote community employment and local economic development. All employment links must strictly follow the principles of openness, fairness, and transparency. Discrimination based on gender, ethnicity, religion, age, health status, or marital status is prohibited, and equal employment opportunities are guaranteed.</p> <p>④ It is strictly prohibited to employ persons under the age of 16; workers under the age of 18 are not allowed to work in hazardous positions. Resolutely put an end to any form of bonded labor and involuntary labor. Once illegal employment is discovered, the employment relationship will be terminated immediately and remedial measures will be taken.</p> <p>⑤Require major suppliers to regularly submit labor management due diligence reports, covering aspects such as contract management, prohibition of child labor, equal pay for equal work, anti-gender discrimination and anti-forced labor.</p> <p>⑥In the bidding and procurement documents of contractors and major suppliers, clearly incorporate labor management requirements into contract terms, including labor contract signing, wage payment, social insurance payment, OHS, and gender equality, and establish a third-party performance management and monitoring mechanism to ensure the effective implementation and comprehensive compliance of the system.</p> <p>(2) Labor working conditions:</p> <p>① The construction site should be equipped with safe drinking water, sanitation facilities, adequate rest areas and dormitories that meet regulations to meet the basic living needs of workers. ②The contractor shall keep the workplace clean and orderly and provide workers with necessary labor protection equipment. ③Appropriate sanitary facilities and living conveniences should be provided according to the special</p>	

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
			<p>needs of female workers, and their privacy and safety should be effectively guaranteed. ④ The project owner, supervision unit and construction contractor should clarify their respective responsibilities in terms of labor condition management, regularly inspect the safety and health conditions of living areas and workplaces, and accept the supervision of the project management office and relevant competent authorities. ⑤ Require major suppliers to regularly submit self-examination reports on labor conditions, covering aspects such as employment compliance, wage payment, working hours, safety and security, and prohibition of child labor. ⑥ Conduct annual reviews and on-site labor condition verification on suppliers identified as high risk. ⑦ Clarify LWC compliance clauses in procurement contracts, and blacklist suppliers who seriously violate labor regulations. ⑧ Strengthen communication with relevant enterprises such as photovoltaic equipment manufacturing, transportation and cold chain equipment supply to ensure that their operations comply with AIB standards and Chinese laws and regulations.</p> <p>(3) Occupational Health and Safety: ① Construction of responsibility system. Establish a clear OHS management system, implement and clarify the responsibilities of implementation units, construction contractors and subcontractors at all levels, ensure that safety responsibilities are implemented step by step, and form an effective responsibility traceability mechanism. ② Normal supervision and improvement mechanism. By establishing full-time safety management positions, we will implement continuous on-site safety inspections and hidden danger inspections, and implement closed-loop rectification management. At the same time, establish a regular security meeting mechanism to systematically report, evaluate and track security risks and the effectiveness of prevention and control measures to achieve</p>	

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
			<p>dynamic management. ③ Systematic training and capacity building. Ensure that pre-job and on-the-job safety education is carried out during the construction and operation periods, covering general skills such as fall prevention, electric shock prevention, mechanical injury prevention, chemical leak response and first aid. For high-risk special operation positions such as high-altitude operations, electrical operations, photovoltaic maintenance, and cold chain operations, mandatory special training will be implemented, and the certificate-based employment system will be strictly implemented. ④ Comprehensive operational risk control. According to national regulations, workers are equipped with and supervised to use qualified personal protective equipment (such as safety helmets, protective shoes, safety belts, goggles, etc.); at the same time, ensure good ventilation and lighting at the construction site, and effectively control occupational hazards such as noise, dust, and harmful gases; for high-risk operations such as high altitudes and electrical work, set up anti-fall devices, insulated tools and other engineering and technical measures; implement health and epidemic prevention and special protection in cold chain, warehousing and other areas. ⑤ Emergency preparation and response guarantee. The site is equipped with first-aid medicines and emergency equipment, and an emergency coordination mechanism is established with the local hospital (Qinbei District People's Hospital) to ensure smooth medical rescue channels; emergency drills for fires, electric shocks, chemical leaks, falls from heights and other scenarios are organized regularly to improve actual handling capabilities. At the same time, the emergency response procedures for work-related injuries must be clarified and implemented to ensure that accident information reporting, rescue and subsequent compensation are timely and efficient.</p>	

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
			<p>Safety measures for photovoltaic system construction. The construction of a 17.7MW distributed photovoltaic system on the rooftop of this project involves risks such as high-altitude work and electrical operation, and the following prevention and control requirements must be strictly implemented during construction: (i) Construction personnel must complete special training for high-altitude work and hold a certificate; (ii) Use safety ropes, double-hook safety belts, anti-fall guardrails and anti-slip passages during operation; (iii) Implement electrical grounding testing, line insulation inspection and power outage permit management to strictly prevent electric shock accidents; (iv) In case of bad weather such as high temperature and thunderstorms, stop outdoor high-altitude work immediately; (v) The construction site shall be equipped with eye-catching safety warning signs, and first aid materials and communication equipment shall be equipped. Suppliers shall provide a statement in their procurement documents confirming that there are no Labor Working Conditions (LWC) issues in their supply chains; obtain similar statements from their subcontractors and suppliers of solar project products; comply with labor requirements consistent with AIB's Environmental and Social Framework (ESF), and require their subcontractors and suppliers of the same project products to provide similar statements and comply with such requirements; and if necessary, AIB shall have the right to inspect and audit compliance with these requirements.</p> <p>(4) Equal Employment and Gender Protection: (i) Comply with national labor laws and regulations, abide by the principle of equal opportunities, and strictly prohibit any form of discrimination against women, disabled people, migrant workers, and young people with legal working age in the recruitment and employment process. During the implementation of the project, the protection of the rights and interests of female</p>	

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
			<p>employees will be fully implemented, ensuring that the centralized office area is equipped with safe drinking water, sanitary facilities and rest areas, and setting up sanitary facilities for men and women to ensure privacy and basic hygiene needs. (ii) In terms of gender equality and prevention of sexual harassment, the project unit will formulate a special system to clarify prohibited behaviors and corresponding punishment measures, and set up a full-time environmental and social management person to supervise the implementation. All contractors, subcontractors and suppliers must implement sexual harassment prevention and gender equality measures, and incorporate relevant content into daily management training to ensure that all construction personnel are covered, covering topics such as vocational skills, production safety, gender equality and sexual harassment prevention. Regularly organize systematic training for project managers and workers on gender equality, gender-based violence and sexual exploitation/harassment (GBV/SEA/SH) prevention, and post promotional materials in office and accommodation areas. (iii) At the same time, effectively ensure that female employees enjoy equal rights in recruitment, promotion, benefits, pregnancy and maternity leave, provide a safe and hygienic working and living environment for female workers, and protect the legitimate rights and interests of pregnancy and lactation in accordance with the law. (iv) Establish a confidential and secure GBV/SEA/SH appeal mechanism at the project level, set up a full-time complaint recipient, ensure smooth complaint channels, timely and professional handling process, respect privacy, and allow anonymous appeals. In addition, establish a collaborative network with local women's federations, public security agencies, and legal aid organizations to provide victims with psychological counseling, legal support, and medical assistance.</p>	

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
			<p>(5) Strengthen publicity and training: With the assistance of PIU and local functional departments, carry out training on OHS, gender equality and anti-sexual harassment, labor rights, and infectious disease prevention and control for project management personnel, contractors and workers. and distribute propaganda posters, leaflets, etc. to workers.</p> <p>(6) Establish and improve the grievance mechanism: ensure that workers' complaints can be handled anonymously and confidentially, and feedback the handling results to the complainant in a timely manner, and inform the AIIB of the mechanism established by the AIIB to inform the project-affected people.</p>	
	Increase employment opportunities	employment	<p>(1) During the project construction period, priority for employment opportunities will be given to local residents (including the 60 Zhuang individuals). It is estimated that 1,309 temporary jobs will be created, comprising 924 skilled jobs and 385 unskilled jobs.</p> <p>(2) During the construction period, contractors are explicitly required to adhere to the principles of equal opportunity and fair treatment in recruitment and employment practices, without any form of discriminatory provisions.</p> <p>(3) Ensure that employment practices are legal and compliant, prohibiting the use of child labor and forced labor.</p>	
	Increase employment opportunities for women (GAP)	employment	Contractors will prioritize providing temporary unskilled positions for local female labor to increase their household income, with at least 30% of these positions allocated to female labor.	/
	Expand women's participation in decision-making (GAP)		The PMO and IA will actively encourage women in the project area to participate in project design and consultation discussions to increase their participation rate. They will also help residents, women, and vulnerable groups in the project area better	/

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
			<p>understand the project and enhance their involvement in project decision making and public consultation.</p> <p>During project implementation, the PMO and IA will conduct extensive project information disclosure and consultation activities to encourage women's participation and protect their legal rights.</p> <p>At least one female staff member in the PMO will be responsible for implementing the project's SEP and ESMP.</p> <p>The PMO will establish and implement a written grievance redress mechanism (GRM) to actively handle complaints and suggestions from residents in the project area, and provide timely feedback to complainants.</p>	
	Enhancing women's development capabilities (GAP)		<ol style="list-style-type: none"> 1. The PMO and IA will conduct traffic safety awareness campaigns and training for residents around the project area, publicize the number of events, participants, and distributed materials, encourage female residents to participate, and report on participation by gender. 2. To mitigate the negative impacts of land acquisition and relocation on locals, especially women's economic status, in Changtian Street and Dadong Town, the PMO and IA will offer skills training to women. 3. The PMO and the IA will ensure that the local residents fully understand and master the knowledge of the prevention and control of infectious diseases (AIDS, etc.), and carry out a wide range of publicity and training activities on the prevention and control of infectious diseases, such as issuing publicity materials, conducting knowledge lectures, seminars, and other forms; (Classified by gender) 4. Female employees involved in project management and implementation agencies will receive project capacity building training; Contractors will provide pre job skills, 	/

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
			<p>safety, and rights protection knowledge promotion and training activities for female workers;</p> <p>1. The tender documents will commit to addressing requirements related to gender-based violence, sexual harassment, and sexual assault. Construction contracts will include clauses on gender-based violence, sexual harassment, and sexual assault, specifying relevant requirements and penalties.</p> <p>2. Both the IA and the contractor will receive training on the risks of gender-based violence, sexual harassment, and sexual assault, in order to enhance sensitivity and prevention awareness in these areas.</p> <p>3. PMO in collaboration with the local women's federation, a grievance redress mechanism for gender-based violence, sexual harassment, and sexual assault will be established to address potential incidents during project implementation. Personnel responsible for handling grievances will receive training, including proper documentation of complaint registration and management, as well as confidentiality of information for complainants of gender-based violence. The safety of grievance committee members will be ensured to prevent bias and fear of retaliation.</p>	
Environmental	Air Quality	Exhaust gases from internal combustion engine fuels	Choose low-emission vehicles, enhance internal combustion engine adjustments, and improve fuel combustion efficiency	/
		Vehicle exhaust gases from the	(1) Enhance roadside greening: Plant trees, shrubs, and grass species that can absorb pollutants in vehicle exhaust gases along both sides of the road to control the dispersion of exhaust gases into the surrounding environment.	/

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
		entrance trunk road.	(2) Improve overall road service levels: Strengthen road management and pavement maintenance, maintain roads in good operating condition to ensure smooth traffic flow, reduce vehicle idling times, and decrease overall vehicle exhaust emissions.	
		Exhaust gases from vehicles at intermodal freight yards and logistics parks	(1)Strengthen organizational management: Inspect vehicles to prohibit those in poor condition, overloaded, or with poorly covered cargo that may spill from operating on the road. (2)Enhance management to reduce vehicle idling: Minimize vehicle idle time and reduce the impact of vehicle exhaust emissions on the surrounding air quality. (3)Promote clean energy: Use clean energy for cargo handling vehicles at intermodal freight yards and logistics parks to further reduce the environmental impact on surrounding air quality. (4)Set up road maintenance personnel: Assign personnel to regularly clean and water the roads to reduce dust and maintain cleanliness.	/
		cooking fume	Kitchen waste treated by high-efficiency electrostatic purifiers before being discharged.	Emission Standard for Cooking Fume (Trial) (GB18483-2001)
	Sound Environment	Noise	(1) Set up prominent speed limit and no-honk signs at the entrances and exits, and strengthen the management of vehicles entering and exiting to maintain smooth traffic flow. (2) When selecting equipment, choose low-noise devices and install vibration-reducing foundations to reduce noise impact at the source. (3) Use measures such as silencers, soundproofing, and sound insulation covers to reduce the adverse environmental impact of noise through its transmission path.	The noise at the four boundaries complies with Class 3 standards in the “Emission Standards for Industrial

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
			<p>(4) Place noise-generating equipment indoors to utilize the building's soundproofing and noise reduction effects.</p> <p>(5) Create green landscaping around roads and buildings to absorb sound through vegetation.</p>	<p>Enterprises Noise at boundary “(GB12348-2008), with daytime noise ≤ 65 dB(A) and nighttime noise ≤ 55 dB(A). The predicted noise levels at surrounding sensitive points meet the World Bank EHS Guidelines for residential, office, and educational areas, with daytime noise ≤ 55 dB(A) and nighttime noise ≤ 55 dB(A).</p>
	Water Environment	Domestic wastewater, general warehouse	After preliminary treatment in septic tanks, the wastewater will be collected through the project area and municipal sewer system and sent to the Airport Area Fourth Sewage Treatment Plant for centralized treatment.	Intergrated Wastewater Discharge Standard

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
		cleaning wastewater		(GB8978-1996)
		Catering wastewater	Build grease traps, and after pretreatment, the wastewater will be collected through the project area and municipal sewer system and sent to the Airport Area Fourth Sewage Treatment Plant for centralized treatment.	
		Production wastewater	If the Automotive Export Trade Center involves maintenance, grease and sedimentation tanks will be set up in the maintenance workshops to treat oily wastewater, and then the wastewater will be collected through the project area and municipal sewer system and sent to the Airport Area Fourth Sewage Treatment Plant for centralized treatment.	
		Pollution caused by oil substances from hazardous waste storage and septic tank leachate affecting groundwater	(1) All storage areas in the project are hardened and impermeable, with supporting wastewater treatment facilities and pipelines that are leak-proof. Wastewater is collected and treated in septic tanks and then flows into the wastewater treatment plant via pipelines. (2) The hazardous waste temporary storage area adopts leak-proof, anti-overflow, and anti-corrosion measures. (3) Strengthen management, improve the technical level of operators, and establish inspection plans to regularly check wastewater pipelines and the impermeability of the ground.	
	Solid Waste	Domestic waste	Set up standardized food waste collection containers in the canteen and ensure the containers are intact and in normal use. Collect and classify with other domestic waste. The local sanitation department will transport the waste daily by specialized sealed vehicles to the International Port Domestic Waste Transfer Station and finally dispose of it at Weichuan Domestic Waste Incineration Plant.	Regular collection and transportation

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
		Production Waste	<p>(1) Waste solar panels during maintenance are directly removed and recycled by the manufacturer, without being temporarily stored on-site.</p> <p>(2) Waste transportation packaging materials (plastic, wood, etc.) are collected and directly sold to recycling stations, without being temporarily stored on-site</p>	Recycling and reuse, no discharge into the environment
		Hazardous Waste	<p>(1) Waste oil: Automotive Export Trade Center generates waste engine oil as hazardous waste, temporarily stored in the hazardous waste storage area, and disposed of by a qualified unit. Oily rags from equipment maintenance are collected in special containers and temporarily stored in the hazardous waste storage area, regularly disposed of by a qualified unit.</p> <p>(2) Waste activated carbon: The project uses activated carbon for exhaust treatment. It will be periodically replaced, and the used activated carbon will be stored in dedicated containers, temporarily stored in the hazardous waste storage area, and disposed of by a qualified unit.</p> <p>(3) Waste batteries: The photovoltaic project and the power supply system in the park may generate waste batteries, classified as hazardous waste, which will be collected and disposed of by a qualified unit.</p>	Standard for Pollution Control on Hazardous Waste Storage (GB 18597-2023)
	Environmental Risks	<p>The following measures shall be adopted for the storage and use of diesel for diesel generators, NH3 refrigerant, and other potential hazardous chemicals:</p> <p>(1)Source Control: Optimize the storage and use processes of hazardous chemicals to reduce leakage; select compliant non-hazardous chemical raw materials and conduct strict quality control.</p> <p>(2)Zoned Protection: Locate the hazardous cargo functional area away from other functional areas and office-living facilities on the leeward side of the dominant wind direction, and maintain a safe distance from surrounding facilities; install emergency</p>	/	

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
			<p>collection facilities such as anti-leakage, anti-seepage and cofferdam facilities for hazardous chemicals, and equip basic protection facilities in the storage area of non-hazardous chemical products; adopt targeted protective measures for equipment involving flammable and explosive media based on their characteristics.</p> <p>(3)Signage and Accessways: Install safety signs and apply safety colors in accident-prone areas; set up eye-catching signs for emergency accessways and exits in production and operation areas.</p> <p>(4)Monitoring and Early Warning: Install real-time monitoring and alarm equipment for hazardous chemicals, and conduct regular hidden danger inspections for the storage of non-hazardous chemicals.</p> <p>(5)Emergency Response: Formulate special emergency plans, equip complete emergency supplies and organize regular drills.</p> <p>(6)Compliant Disposal: Entrust qualified entities with the standardized disposal of waste hazardous chemicals and strictly implement environmental protection requirements.</p>	
Occupational Health and Safety (OHS)			<p>(1) Develop an environmental and social management plan for the operation phase, and provide regular training for workers.</p> <p>(2) Provide workers with free personal protective equipment, including safety goggles, gloves, and safety shoes; provide noise-reduction equipment for workers in high-noise environments.</p> <p>(3) Develop emergency preparedness and response plans for accidents and emergencies, clearly define reporting procedures. This includes environmental and public health emergencies related to hazardous material leaks and similar events.</p> <p>(4) Provide training on OHS, and emergency response to workers, and offer</p>	/

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
			<p>specialized OHS training for those working with hazardous waste.</p> <p>(5) Limit public access to the project operation area.</p>	
Social	Increase employment opportunities (GAP)	employment	<p>(1) During the project operational phase, priority for employment opportunities will be given to local residents (including the 60 Zhuang individuals). It is estimated that 91 jobs will be created, comprising 79 skilled jobs and 12 unskilled jobs.</p> <p>(2) The project operator shall adhere to the principles of equal opportunity and fair treatment in recruitment and employment practices, prohibiting any form of discriminatory provisions, such as restrictions based on age or gender of applicants.</p> <p>(3) Relevant professional skill training (e.g., in logistics management, equipment operation, warehouse maintenance) shall be provided for new employees to enhance their employability.</p>	/
	Community Safety	Healthcare and	<p>(1) The project operator shall regularly release operational information through channels such as community bulletin boards, online platforms, and service hotlines, and systematically collect and respond to residents' requests. Biannual consultation meetings shall be organized for affected residents, including 21 households impacted by railway noise and 9 households impacted by vibration in sensitive areas like Lao Village. Environmental monitoring data on noise and vibration shall be disclosed, and the effectiveness of existing mitigation measures along with potential improvements shall be discussed to ensure residents' concerns are promptly addressed.</p> <p>(2) For scattered households in sensitive areas like Lao Village affected by noise and vibration, noise reduction measures such as the installation and maintenance of noise-reducing windows shall be implemented to protect their residential environmental quality from long-term disturbance.</p> <p>(3) Along the dedicated railway line and traffic routes, ongoing public awareness</p>	/

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
			<p>campaigns on traffic and railway safety shall be conducted through community notices, informational materials, and dedicated lectures. These efforts shall specifically target groups such as women, the elderly, and students to enhance their recognition and prevention capabilities regarding traffic and railway risks, ensuring a safe travel environment.</p> <p>(4) The operator shall regularly organize health education and disease prevention training for workers. This includes knowledge on the prevention and control of infectious diseases such as HIV/AIDS, STIs, and tuberculosis, utilizing methods like distributing materials, posting posters, and holding lectures to strengthen workers' self-protection awareness and capability.</p> <p>(5) Domestic waste shall be collected and disposed of by the municipal sanitation department uniformly. Hazardous waste must be collected, temporarily stored, and transported by qualified units. The project operator shall regularly inspect waste management practices and maintain cleanliness in the operational area to prevent pollution.</p>	
	Reduce the risk of gender-based violence (GAP)		<p>1. Training sessions on the risks of GBV, SH, and SA will be organized to enhance sensitivity and awareness.</p> <p>2. In collaboration with the local women's federation, a GRM for GBV, SH, and SA will be established to address potential incidents during project implementation. Personnel responsible for handling grievances will receive training, including proper documentation of complaint registration and management, as well as confidentiality of information for complainants of GBV.</p>	/
	Worker Working Conditions and		(1) Establish and improve a labor contract management system:	/

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
	Occupational Health & Safety		<p>① Ensure that all hired employees, including temporary employees, sign labor and labor contracts in accordance with the law. The contract must clearly define the work content, construction period, salary standards, working hours, insurance benefits, labor conditions, occupational health protection measures and grievance mechanisms, and fully purchase accident insurance for workers through a third-party company.</p> <p>② the salary standard of project employees shall not be lower than the minimum wage standard of the Guangxi Zhuang Autonomous Region, and must be paid in full monthly. Any form of arrears or deductions is strictly prohibited. Working hours should comply with national legal standards; if overtime is really necessary, workers' consent should be obtained in advance and overtime wages should be paid in accordance with the law.</p> <p>③ During the recruitment process, social responsibilities should be actively fulfilled, priority should be given to absorbing local labor force, and appropriate preference should be given to women, low-income groups and other disadvantaged employment groups to promote community employment and local economic development. All employment links must strictly follow the principles of openness, fairness, and transparency. Discrimination based on gender, ethnicity, religion, age, health status, or marital status is prohibited, and equal employment opportunities are guaranteed.</p> <p>④ It is strictly prohibited to employ persons under the age of 16; workers under the age of 18 are not allowed to work in hazardous positions. Resolutely put an end to any form of bonded labor and involuntary labor. Once illegal employment is discovered, the employment relationship will be terminated immediately and remedial measures will be taken.</p>	

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
			<p>⑤ Require major suppliers to regularly submit labor management due diligence reports, covering aspects such as contract management, prohibition of child labor, equal pay for equal work, anti-gender discrimination and anti-forced labor.</p> <p>⑥ In the bidding and procurement documents of contractors and major suppliers, clearly incorporate labor management requirements into contract terms, including labor contract signing, wage payment, social insurance payment, OHS, and gender equality, and establish a third-party performance management and monitoring mechanism to ensure the effective implementation and comprehensive compliance of the system.</p> <p>(2) Labor working conditions:</p> <p>① The construction site should be equipped with safe drinking water, sanitation facilities, adequate rest areas and dormitories that meet regulations to meet the basic living needs of workers. ② The contractor shall keep the workplace clean and orderly and provide workers with necessary labor protection equipment. ③ Appropriate sanitary facilities and living conveniences should be provided according to the special needs of female workers, and their privacy and safety should be effectively guaranteed. ④ The project owner, supervision unit and construction contractor should clarify their respective responsibilities in terms of labor condition management, regularly inspect the safety and health conditions of living areas and workplaces, and accept the supervision of the project management office and relevant competent authorities. ⑤ Require major suppliers to regularly submit self-examination reports on labor conditions, covering aspects such as employment compliance, wage payment, working hours, safety and security, and prohibition of child labor. ⑥ Conduct annual reviews and on-site labor condition verification on suppliers identified as high risk. ⑦</p>	

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
			<p>Clarify LWC compliance clauses in procurement contracts, and blacklist suppliers who seriously violate labor regulations. ⑧Strengthen communication with relevant enterprises such as photovoltaic equipment manufacturing, transportation and cold chain equipment supply to ensure that their operations comply with AIB standards and Chinese laws and regulations.</p> <p>(3) Occupational Health and Safety (OHS): ①Construction of responsibility system. Establish a clear OHS management system, implement and clarify the responsibilities of implementation units, construction contractors and subcontractors at all levels, ensure that safety responsibilities are implemented step by step, and form an effective responsibility traceability mechanism. ②Normal supervision and improvement mechanism. By establishing full-time safety management positions, we will implement continuous on-site safety inspections and hidden danger inspections, and implement closed-loop rectification management. At the same time, establish a regular security meeting mechanism to systematically report, evaluate and track security risks and the effectiveness of prevention and control measures to achieve dynamic management. ③Systematic training and capacity building. Ensure that pre-job and on-the-job safety education is carried out during the construction and operation periods, covering general skills such as fall prevention, electric shock prevention, mechanical injury prevention, chemical leak response and first aid. For high-risk special operation positions such as high-altitude operations, electrical operations, photovoltaic maintenance, and cold chain operations, mandatory special training will be implemented, and the certificate-based employment system will be strictly implemented. ④ Comprehensive operational risk control. According to national regulations, workers are equipped with and supervised to use qualified</p>	

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
			<p>personal protective equipment (such as safety helmets, protective shoes, safety belts, goggles, etc.); at the same time, ensure good ventilation and lighting at the construction site, and effectively control occupational hazards such as noise, dust, and harmful gases; for high-risk operations such as high altitudes and electrical work, set up anti-fall devices, insulated tools and other engineering and technical measures; implement health and epidemic prevention and special protection in cold chain, warehousing and other areas. ⑤Emergency preparation and response guarantee. The site is equipped with first-aid medicines and emergency equipment, and an emergency coordination mechanism is established with the local hospital (Qinbei District People's Hospital) to ensure smooth medical rescue channels; emergency drills for fires, electric shocks, chemical leaks, falls from heights and other scenarios are organized regularly to improve actual handling capabilities. At the same time, the emergency response procedures for work-related injuries must be clarified and implemented to ensure that accident information reporting, rescue and subsequent compensation are timely and efficient.</p> <p>Safety measures for photovoltaic system operation and maintenance. The project builds a 17.7MW distributed photovoltaic system on the rooftop, and its operation and maintenance involves risks such as high-altitude work and electrical operation, and the following prevention and control requirements must be strictly implemented in daily operation and maintenance: (i) operation and maintenance personnel must complete special training for high-altitude work and hold a certificate; (ii) standardize the use of safety ropes, double-hook safety belts, anti-fall guardrails and anti-slip channels during operation; (iii) Implement electrical grounding testing, line insulation inspection and power outage permit management to strictly prevent electric shock</p>	

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
			<p>accidents; (iv) In case of bad weather such as high temperature and thunderstorms, stop outdoor high-altitude work immediately; (v) Eye-catching safety warning signs are set up at the operation and maintenance site, and first aid materials and communication equipment are equipped.</p> <p>(4) Equal Employment and Gender Protection: (i) Comply with national labor laws and regulations, abide by the principle of equal opportunities, and strictly prohibit any form of discrimination against women, disabled people, migrant workers, and young people with legal working age in the recruitment and employment process. During the implementation of the project, the protection of the rights and interests of female employees will be fully implemented, ensuring that the centralized office area is equipped with safe drinking water, sanitary facilities and rest areas, and setting up sanitary facilities for men and women to ensure privacy and basic hygiene needs. (ii) In terms of gender equality and prevention of sexual harassment, the project unit will formulate a special system to clarify prohibited behaviors and corresponding punishment measures, and set up a full-time environmental and social management person to supervise the implementation. All contractors, subcontractors and suppliers must implement sexual harassment prevention and gender equality measures, and incorporate relevant content into daily management training to ensure that all construction personnel are covered, covering topics such as vocational skills, production safety, gender equality and sexual harassment prevention. Regularly organize systematic training for project managers and workers on gender equality, gender-based violence and sexual exploitation/harassment (GBV/SEA/SH) prevention, and post promotional materials in office and accommodation areas. (iii) At the same time, effectively ensure that female employees enjoy equal rights in</p>	

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
			<p>recruitment, promotion, benefits, pregnancy and maternity leave, provide a safe and hygienic working and living environment for female workers, and protect the legitimate rights and interests of pregnancy and lactation in accordance with the law. (iv) Establish a confidential and secure GBV/SEA/SH appeal mechanism at the project level, set up a full-time complaint recipient, ensure smooth complaint channels, timely and professional handling process, respect privacy, and allow anonymous appeals. In addition, establish a collaborative network with local women's federations, public security agencies, and legal aid organizations to provide victims with psychological counseling, legal support, and medical assistance.</p> <p>(5) Strengthen publicity and training: With the assistance of PIU and local functional departments, carry out training on OHS, gender equality and anti-sexual harassment, labor rights, and infectious disease prevention and control for project management personnel, contractors and workers. and distribute propaganda posters, leaflets, etc. to workers.</p> <p>(6) Establish and improve the grievance mechanism: ensure that workers' complaints can be handled anonymously and confidentially, and feedback the handling results to the complainant in a timely manner, and inform the AIIB of the mechanism established by the AIIB to inform the project-affected people.</p>	
GAP	Increased Employment Opportunities for Women		<p>1. During both the project construction and operational phases, priority for employment opportunities, especially for unskilled positions, shall be given to women from the villages and communities within the project area. For jobs with low physical demands, age restrictions may be appropriately relaxed to prioritize the hiring of women who face difficulties in finding non-agricultural employment. Employment opportunities for women shall be further increased through skills training.</p>	/

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
			<p>Furthermore, within the logistics park, focus will be placed on new forms of employment such as couriers, truck drivers, warehouse operatives, and e-commerce/livestreaming roles, promoting women's equal access to and benefit from these emerging employment sectors.</p> <p>2.The principles of equal employment and equal pay for equal work shall be strictly implemented.</p>	
	Enhanced Women's Participation in Decision-Making		<p>3.Encourage and support the participation of all women in the project area in project design, decision-making, and various consultation activities, including those related to information disclosure, land acquisition compensation, resettlement, construction progress, and environmental and social impact communication.</p> <p>4. Project information, including key details on compensation, resettlement, and livelihood restoration, shall be promptly disseminated to women through bulletin boards, WeChat groups, community notices, and other means, ensuring comprehensive and effective information delivery. The target is to increase the information awareness rate among women to 75% (Baseline: 40%).</p> <p>5.During negotiations for land acquisition and compensation and the formulation of resettlement plans, ensure women's participation in consultations, with a target of no less than 40% female representation (Baseline: 20%).</p> <p>6. Set up full-time female positions in charge of gender affairs in the PIU, and invite the Qinbei District Women's Federation to participate to ensure the effective implementation of environmental and social management plans (including gender action plans).</p> <p>7. Promote the development of a female-friendly community within the logistics park by establishing a women's organization and supporting facilities such as a "Women's</p>	/

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
			Home," providing comprehensive services including communication and mutual support, capacity-building, and rights protection for female workers in the park.	
	Enhancing Development Capacity	Women's	<p>8. During both the project construction and operational phases, ensure that 90% of Women worker participate in training related to vocational skills, safety production, and gender equality (Baseline: 50%).</p> <p>9. During project implementation, organize employment training and knowledge lectures, leveraging relevant departments such as the Women's Federation and the Human Resources and Social Security Bureau, as well as communities, to improve women's employment and entrepreneurship skills and opportunities.</p>	/
	Mitigating Violence Risks	Gender-Based	<p>10. The Qinbei District Women's Federation will assist and participate in the PIU to establish a project grievance mechanism, including a project grievance mechanism for gender violence, sexual harassment and sexual assault, including complaint registration, data management, confidentiality requirements, etc., to ensure that the privacy and safety of the complainant are effectively protected, and at the same time protect the complaint handling members from prejudice and retaliation.</p> <p>11. Under the guidance of the Qinbei District Women's Federation, cooperate with the PIU to regularly carry out gender equality and anti-sexual harassment publicity and education activities in the project workplace and community. At the same time, strengthen the supervision of construction sites to avoid harmful behaviors such as sexual violence, sexual exploitation and abuse.</p> <p>12. In order to strengthen the protection of the rights and interests of female workers, the PIU will establish a collaborative mechanism with the Qinbei District Women's Federation to provide training and publicity for female workers through regular mental health counseling and rights protection training, so as to improve women's self-</p>	

Environmental/Social Aspects	Category	Impact	Mitigation Measures	Implementation performance
			protection ability.	

Internal Environmental Monitoring Plan During the Construction Period

Project	Monitoring Factor	Monitoring Location	Monitoring Frequency	Compliance standards	Implementing Unit	Supervising Unit	Funding Source
Air Quality	Dust control measures, equipment maintenance	Visual inspection at all construction sites	Weekly	China's "Ambient Air Quality Standards" (GB 3095-2012) Class 2 standards and the World Bank Group's "Environmental, Health and Safety (EHS) Guidelines"	Construction Contractor	CSC	Included in the mitigation measure costs for the project's construction phase
Noise	L _{Aeq} : Measured with handheld noise meter	Construction site boundary	At least once per week during peak construction	China's GB " Environmental Quality Standards for Noise " (GB 3096-2008), " Emission Standard of Environmental Noise for boundary of Construction Site " (GB12523-2011), and the World Bank's EHS Guidelines	Construction Contractor	CSC	
Solid Waste	Domestic waste, construction waste, excavated soil, hazardous waste	Visual inspection at all sites	Daily	Construction waste is managed in accordance with the "Qinzhou City Urban Construction Waste Management Measures". The temporary storage facilities for petroleum-based hazardous waste comply with the "Pollution Control Standards for Hazardous Waste Storage" (GB 18597-2023). All entrusted disposal units have the corresponding hazardous waste disposal qualifications for their respective categories.	Construction Contractor	CSC	
Soil and Water Conservation	Soil erosion intensity	Visual inspection at	Weekly especially	/	Construction Contractor	CSC	

		all sites	after heavy rain				
	Topsoil	Visual inspection at topsoil stockpiles	Weekly especially after heavy rain	/	Construction Contractor	CSC	
Biodiversity Protection	Animal and plant protection measures, vegetation restoration status	Visual inspection of all construction sites	Weekly	/	Construction Contractor	CSC	
Occupational Health and Safety (OHS)	Site hygiene and safety. Contractor's goal: emergency plan in place, all workers aware of the emergency plan	Check all sites	Monthly	/	Construction Contractor	CSC	

Internal Social Monitoring During the Construction Period

Cat.	Action	Monitoring Indicators	Implementation Requirements	Implementing Unit	Supervising Unit	Funding Source
Social Management Plan	Effectively mitigate impacts on surrounding residents	<p>1. Public participation and consultation activities involving residents from the project area during project implementation, including the number of consultations participated in and number of participants (disaggregated by gender); to promptly identify and resolve existing issues.</p> <p>2. Records and resolution status of environmental impact complaints received from residents in the project area during the construction period.</p>	Truthfully record and retain relevant supporting documents	Construction Contractor	CSC	Included in the mitigation measure costs for the project's construction phase
	Enhance road safety	<p>3. Route planning for large trucks, including notices for staggered peak travel, detour plans, and notifications on community bulletin boards; distribution locations and photos of road signs in village sections.</p> <p>4. Road safety awareness or training activities involving residents from the project area, including the number of sessions held, participation frequency (disaggregated by gender), and quantities of brochures and posters distributed.</p> <p>5. Records of road traffic accidents within the project area during the construction period.</p>	Truthfully record and retain relevant supporting documents	Construction Contractor	CSC	
	Strengthen infectious disease prevention and control	6. Dissemination and training on public safety and prevention knowledge for HIV/AIDS, STIs, and other infectious diseases, including quantities of pamphlets, posters, and photo albums; number of prevention training sessions and participants.	Truthfully record and retain relevant supporting documents	Construction Contractor	CSC	
	Increase employment opportunities	7. Number of jobs created during the project construction phase; disaggregated into skilled and unskilled jobs.	Truthfully record and retain relevant supporting documents	Construction Contractor	CSC	
	Work Conditions and Health & Safety	8. Development and implementation status of labor management procedures, e.g., signing of labor agreements, enrollment in industrial injury	Truthfully record and retain relevant	Construction Contractor	CSC	

		insurance; implementation status of equal pay for equal work for men and women. 9.Safety regulations, rights protection, and infectious disease prevention knowledge dissemination and training activities for construction workers, including types of activities, frequency, and participant numbers. 10.Number of worker complaints/grievances, their resolution status, and feedback provided.	supporting documents			
GAP	Increase employment opportunities	1.Number of jobs created during the project construction phase, disaggregated by sex. Female employee ratio shall be no less than 20% (Baseline: 0%).	Truthfully record and retain relevant supporting documents	Construction Contractor	CSC	
	Enhancing women's participation in decision-making	2.Ensure female representation is no less than 40% (Baseline: 20%) in project consultations, information disclosure, and decision-making activities. 3.Project information (including construction activities, progress, land acquisition and demolition compensation policies, detour notices, and grievance mechanisms) shall be disclosed in a timely manner, with the target of increasing the information awareness rate among women to 75% (Baseline: 40%). 4. In LA and HD consultation activities, ensure the proportion of participating female representatives is no less than 40% (Baseline: 20%). 5. Establish a dedicated female position responsible for gender affairs within the PIU.	Truthfully record and retain relevant supporting documents	Construction Contractor	CSC	
	Enhancing women's development capacity	6.During the project construction phase, ensure that Women worker account for no less than 90% of participants in training programs covering vocational skills, occupational safety, gender equality, and the prevention of gender-based violence, sexual exploitation, and sexual harassment (baseline: 50%).	Truthfully record and retain relevant supporting documents	Construction Contractor	CSC	
	Mitigating Gender-Based	7. Establish a grievance redress mechanism accessible to women. Throughout the project	Truthfully record and retain	Construction Contractor	CSC	

	Violence Risks	implementation period, track and report on the reception and handling of complaints, including the number of feedback entries received, complaints lodged, and complaints resolved. 8.100% of female workers receive training on labor rights protection; zero incidents of gender-based violence have occurred.	relevant supporting documents			
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Appendix 5: Gender Action Plan

In accordance with the requirements of the Asian Infrastructure Investment Bank's (AIIB) Environmental and Social Framework (ESF) and Environmental and Social Standard 1 (ESS1) on social and gender inclusion, as well as relevant Chinese laws and regulations, a gender equality and social inclusion perspective has been systematically integrated into all stages of project design and implementation. A Gender Action Plan (GAP) was prepared and will be implemented as a key component of the project's environmental and social management. This is to ensure women enjoy equal status and opportunities throughout the project cycle, thereby achieving the goals of gender equality and women's empowerment.

During the survey, sex-disaggregated data was systematically collected and analyzed, and a gender equality perspective was fully integrated into the project's lifecycle management. A total of 380¹ valid questionnaires were completed (176 women, (46.3%)), 16 consultation meetings/workshops (with 240 participants, 84 women (35%)), and 45 key informant interviews were conducted (15 women (33%)). The survey focused on the status of women in the project area regarding employment, livelihoods, participation in public decision-making, access to information, and safety and health. All the respondents were in favor of the project, believing that it would provide them with job opportunities and more income. The potential impacts indicate: i) Insufficient participation of women in public decision-making. Although women show a stronger willingness to engage in public decision-making than men, only 21.59% of women are included as participants, yet 73.86% believe that project information disclosure and public consultation are very important. ii) Relatively fewer employment opportunities for women. Due to greater family and care responsibilities and a lack of relevant job skills, men often have easier access to employment. In terms of employment, 42.05% of women find it relatively difficult to obtain job opportunities, and 48.86% of women think men earn significantly higher incomes. iii) Low awareness of grievance redress mechanisms (GRMs) among some women. Only 60.80% of women are aware of existing grievance channels. iv) In terms of construction-related impacts, 67.61% of women expressed worries about potential traffic safety, dust, vibration and noise issues during construction, and v) Potential risks of gender-based violence, sexual exploitation and abuse, and sexual harassment (GBV/SEA/SH) during construction and operational environments.

To address these potential gender-related risks, achieve women's economic empowerment, and ensure their equal participation and benefit, the project has developed targeted actions and measurable indicators under GAP to build a female-friendly logistics park. Minimum participation and employment quotas for women has been set to ensure their active involvement in project management, construction, and operation. Key actions and outcome indicators include: (i) Set up a dedicated position for gender affairs in the PIU, and a women's organization in the park; (ii) In project consultation, information disclosure and decision-making activities, ensure that the proportion of female representatives is no less than 40% (the baseline is 20%); (iii) The target for the proportion of female employment in the park is set at least 30% (the baseline is 0); and (iv) During the construction and operation phases, ensure that the proportion of women participating in vocational skills, safety production and gender equality-related training is no less than 90% (the baseline is 50%), and (v) Establishing a safe, confidential, and accessible grievance mechanism that addresses GBV/SEA/SH, etc., with designated personnel responsible for handling and follow-up, fully protecting complainants' privacy and safety.

To ensure effective implementation of these measures/actions, as detailed in Table. Corresponding management and monitoring mechanisms have been established. Its progress will be incorporated into regular project monitoring and semi-annual reports. Relevant information will be made publicly available in line with AIIB's disclosure and stakeholder engagement requirements, thereby continuously advancing gender equality and women's empowerment throughout the project lifecycle.

¹ Among a total of 380 valid questionnaires, 193 were completed by residents directly affected by LA and HD, accounting for 51% of the total. The remaining 187 questionnaires were from non-LA-and-HD residents within the project impact area, representing 49%.

Table of the Gender Action Plan

Actions	Action Measures	Monitoring Indicators	Implementing Agency	Budget and sources
Increase employment opportunities for women	<p>1. During the project construction and operation period, priority will be given to providing employment opportunities, especially non-technical positions, to women in the village communities involved in the project area. For jobs that are not physically demanding, the age limit can be appropriately relaxed, and women who have difficulty finding non-agricultural employment opportunities should be given priority; and skills training can be used to increase employment opportunities for women.</p> <p>2. Strictly implement the principles of equal employment and equal pay for equal work.</p>	<p>(i)The number of jobs provided during the construction period of the project, and disaggregated by gender. The proportion of female employees is not less than 20% (baseline: 0%)</p> <p>(ii)The target of female employment ratio in the park is set to no less than 30% (baseline: 0%)</p>	Qinzhou Huangma Asset Management Group Co., Ltd. and contractors	Included in the construction budget, Qinzhou Huangma Asset Management Group Co., Ltd.'s own funds
Expand women's participation in decision-making	<p>3. Encourage and support all women in the project area to participate in project design, decision-making and various consultation activities, including information disclosure, land acquisition compensation, resettlement, construction progress, environmental and social impact communication, etc.</p> <p>4. Timely announcement of project information to women through bulletin boards, WeChat groups, community announcements, etc., including proactive disclosure of key information such as compensation, resettlement, and livelihood restoration, ensures that information is conveyed comprehensively and effectively, and increases women's awareness rate to 75% (baseline: 40%).</p> <p>5. During the land acquisition and demolition compensation consultation and resettlement plan formulation process, ensure that women participate in consultation activities and ensure that the proportion of female representatives is no less than 40% (baseline: 20%);</p> <p>6. Set up full-time female positions in charge of gender affairs in the project implementation unit, and invite the</p>	<p>(iii)In project consultation, information disclosure and decision-making activities, ensure that the proportion of female representation is no less than 40% (baseline: 20%).</p> <p>(iv)Timely disclosure of project information, including project construction activities, progress, land acquisition and demolition compensation policies, detour notices, appeal mechanisms and other relevant information, has increased the female awareness rate to 75% (baseline: 40%).</p> <p>(v) Ensure that the participation rate of female representatives in LA and HD consultation activities reaches no less than 40% (baseline: 20%).</p> <p>(vi)Set up female positions dedicated to gender affairs in project implementation units.</p>	PMO, Qinzhou Huangma Asset Management Group Co., Ltd., Changtian Sub-district Office and affected communities and village (neighborhood) committees in Dadong Town, Qinbei District Women's Federation	Included in the project funding

	<p>Qinbei District Women's Federation to participate to ensure the effective implementation of environmental and social management plans (including GAPs).</p> <p>7. Promote the establishment of a female-friendly community within the logistics park by setting up a women's organization and supporting facilities such as a "Women's Home," providing comprehensive services—including communication and mutual support, capacity building, and rights protection—for female workers in the park.</p>	<p>(vii) Develop a female-friendly community within the logistics park by establishing a women's organization and supporting facilities such as a "Women's Home."</p>		
Enhancing women's development capacity	<p>8. Ensuring that the proportion of women participating in vocational skills, occupational safety, and gender equality training reaches no less than 90% during the construction and operation phases (Baseline: 50%).</p> <p>9. During the implementation of the project, relevant departments and communities such as the Women's Federation of Qinbei District and the Bureau of Human Resources and Social Security will organize employment training and knowledge lectures to improve women's employment and entrepreneurial skills and opportunities.</p>	<p>(viii~ix) During both the project construction and operation phases, ensure that Women worker account for no less than 90% of participants in training programs covering vocational skills, occupational safety, gender equality, and the prevention of gender-based violence, sexual exploitation, and sexual harassment (baseline: 50%).</p>	<p>Qinzhou Huangma Asset Management Group Co., Ltd. and contractors, Qinbei District Women's Federation, Human Resources and Social Security Bureau</p>	<p>Included in the construction budget, Qinzhou Huangma Asset Management Group Co., Ltd.'s own funds</p>
Reducing the risk of gender-based violence	<p>10. The Qinbei District Women's Federation will assist and participate in the project implementation unit to establish a project complaint mechanism, including a complaint mechanism for gender violence, sexual exploitation and sexual harassment, including complaint registration, data management, confidentiality requirements, etc., to ensure that the privacy and safety of the complainant are effectively protected, and at the same time protect the complaint handling members from prejudice and retaliation.</p> <p>11. Under the guidance of the Qinbei District Women's Federation, the project implementation unit regularly carried out gender equality and anti-sexual harassment publicity and education activities in the project workplace and community. At the same time, strengthen the supervision of construction sites to avoid harmful behaviors such as sexual violence, sexual exploitation and abuse.</p> <p>12. In order to strengthen the protection of the rights and</p>	<p>(x) Establish a grievance mechanism accessible to women. Throughout the project implementation period, track and report on the reception and handling of complaints, including the number of feedback entries received, complaints lodged, and complaints resolved.</p> <p>(xi~xii) 100% of female workers receive training on labor rights protection; zero incidents of gender-based violence have occurred.</p>	<p>PMO, Qinzhou Huangma Asset Management Group Co., Ltd., contractors, Changtian Sub-district Office and affected communities and village (neighborhood) committees of Dadong Town, Qinbei District Women's Federation</p>	<p>Included in the construction budget and the daily expenditure budget of Qinzhou Huangma Asset Management Group Co., Ltd. and relevant government departments</p>

	interests of female laborers, the project implementation unit will establish a collaborative mechanism with the Qinbei District Women's Federation to provide training and publicity for female workers through regular mental health counseling and rights protection training, so as to improve women's ability to protect their rights.			
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Appendix 6: Table of Ethnic Minority Development Measures

Actions	Action Measures	Monitoring Indicators	Implementing Entity	Budget and Sources
I. Resettlement and Livelihood Restoration				
1. Protection of the rights and interests of ethnic minority	(i) During the land acquisition process, invite 11 affected family members of the Zhuang ethnic minority, including female members, to participate in discussions regarding the land acquisition compensation and resettlement plan and compensation standards, to ensure their rights and interests are protected.	(i) 100% participation of 11 Zhuang individuals affected by land acquisition in public participation activities such as land acquisition compensation discussions	Qinzhou Huangma Assets Management Group Co., Ltd. Assisting Entities: Qinbei District Ethnic and Religious Affairs Bureau, Qinbei District land and housing Acquisition Center, Dadong Town Government, Hengling Village	Included in the Resettlement Plan (RP) budget
	(ii) Strictly implement the land acquisition and demolition compensation standards uniformly formulated by the PRC, Guangxi Zhuang Autonomous Region, and Qinbei District, ensuring transparency in the content of compensation agreements. Before signing the agreements, ensure that the compensation policies are explained in detail to the 11 affected Zhuang ethnic minority family members, ensuring their full understanding.	(ii) 100% of 11 Zhuang individuals received an explanation of the household admission policy and signed a compensation agreement. The record of complaints or grievances regarding ethnic minority compensation is 0.	Qinzhou Huangma Assets Management Group Co., Ltd. Assisting Entities: Qinbei District Ethnic and Religious Affairs Bureau, Qinbei District land and housing Acquisition Center, Dadong Town Government, Hengling Village	Included in the Resettlement Plan (RP) budget

Actions	Action Measures	Monitoring Indicators	Implementing Entity	Budget and Sources
	<p>(iii) During the implementation of the livelihood restoration plan, based on the actual situation of the 11 affected Zhuang family members, prioritize providing them with: (a) Targeted skills training (e.g., forklift operation, cleaning, greening combined with the labor demands of the Huangma Industrial Park); (b) Priority recruitment opportunities for non-technical positions (e.g., security, cleaning) during project construction and operation; (c) Policy briefings and assistance in applying for the pension insurance for land-expropriated farmers.</p>	<p>(iii) 100% of the working-age members of Zhuang ethnic minority families receive livelihood restoration measures (training/job referrals/policy briefings). Document their participation and income improvement results</p>	<p>Qinzhou Huangma Assets Management Group Co., Ltd.</p> <p>Assisting Entities: Qinbei District Ethnic and Religious Affairs Bureau, Qinbei District Human Resources and Social Security Bureau, Qinbei District Women's Federation, Contractors</p>	<p>Included in the Resettlement Plan (RP) budget</p>
	<p>(iv) Conduct regular monitoring surveys on the livelihood restoration status of the 11 affected Zhuang family members (including women) to ensure their income level is restored to or exceeds the pre-acquisition level</p>	<p>(iv) Monitor the livelihood restoration status of Zhuang ethnic minority families, reflected and assessed through regular monitoring reports</p>	<p>Qinzhou Huangma Assets Management Group Co., Ltd.</p> <p>Assisting Entities: Qinbei District Ethnic and Religious Affairs Bureau, Dadong Town Government, Hengling Village</p>	<p>Included in the Resettlement Plan (RP) budget</p>
II. Public Participation and Information Disclosure				
<p>2. Meaningful Participation and Consultation</p>	<p>(v) During public consultation activities for all key stages such as land acquisition, resettlement plan, construction schedule, and operation management, invite 60 ethnic minority representatives (including female members) from the project</p>	<p>(v) Record the participation numbers of Zhuang representatives (disaggregated by gender) in public consultation activities organized at various</p>	<p>Qinzhou Huangma Assets Management Group Co., Ltd.</p>	<p>Included in the project management budget</p>

Actions	Action Measures	Monitoring Indicators	Implementing Entity	Budget and Sources
	impact area to effectively participate in consultation activities through village committees.	project stages, especially ensuring the participation of the 11 affected Zhuang family members.	Assisting Entities: Qinbei District Ethnic and Religious Affairs Bureau, Dadong Town Government, Hengling Village	
3. Information Disclosure	(vi) Through various channels such as village/community bulletin boards, WeChat groups, and household notices, project information will be disclosed in a timely and proactive manner. Written notice of key information (e.g. compensation policy, construction plan, employment recruitment) to ensure that the 60 Zhuang residents (including female members) in the affected area of the project are aware of it.	(vi) 100% delivery of key project information to Zhuang ethnic minority families. Document information delivery methods and feedback	Qinzhou Huangma Assets Management Group Co., Ltd. Assisting Entities: Qinbei District Ethnic and Religious Affairs Bureau, Dadong Town Government, Hengling Village	Included in the project management budget
III. Equal Employment Opportunities				
4. Increasing Employment Opportunities for Ethnic Minorities	(vii) During the project construction and operation phases, include clauses in contractor contracts giving priority to hiring local labor under equal conditions. Publicly display recruitment information in villages and communities, ensuring that the 60 Zhuang residents (including female members) in the project impact area have fair access to the information. Ensure information reaches affected Zhuang families. If there are willing and qualified workers, prioritize their recruitment under equal conditions.	(vii) Record the number of ethnic minority employees, disaggregated by gender, among the jobs provided to local residents during the project construction and operation periods	Qinzhou Huangma Assets Management Group Co., Ltd. Assisting Entities: Contractors, Qinbei District Ethnic and Religious Affairs Bureau	Included in the construction budget and the project management funds of Qinzhou Huangma Asset Management Group Co., Ltd.
	(viii) In coordination with the Qinbei District Human Resources and Social Security Bureau and the Women's Federation,	(viii) Participation rate of working-age labor from affected Zhuang	Qinzhou Huangma Assets Management	Included in the Resettlement

Actions	Action Measures	Monitoring Indicators	Implementing Entity	Budget and Sources
	conduct free vocational skills training for all eligible local residents. Ensure that training notifications and promotions reach the 60 Zhuang residents (including female members) in the project impact area, encouraging and supporting their family members (especially women) to participate and enhance their employment competitiveness.	ethnic minority families in training, disaggregated by gender	Group Co., Ltd. Assisting Entities: Qinbei District Ethnic and Religious Affairs Bureau, Qinbei District Human Resources and Social Security Bureau, Qinbei District Women's Federation	Plan (RP) budget and relevant departments' routine expenditure budget
IV. Occupational Health and Safety				
5. Ensuring Occupational Health and Safety for Ethnic Minority Workers	(ix) All contractors must ensure that all workers, including ethnic minority and female workers, sign labor contracts according to law, are covered by work-related injury insurance, and are provided with personal protective equipment (PPE, such as safety helmets, protective shoes, reflective vests) that meets national standards.	(ix) Labor contract signing rate and work-related injury insurance coverage rate for workers disaggregated by gender and ethnicity are both 100%. On-site PPE compliance rate is 100%	Qinzhou Huangma Assets Management Group Co., Ltd., Contractors, Supervision Units	Included in the construction budget
	(x) Ensure that all workers (including ethnic minority and female workers) receive pre-job and on-the-job occupational health and safety training. The training content should cover risks specific to this project (e.g., working at heights, electrical safety, cold chain operations) and be delivered in easy-to-understand language.	(x) 100% of ethnic minority workers receive OHS training.	Qinzhou Huangma Assets Management Group Co., Ltd., Contractors, Supervision Units	Included in the construction budget
	(xi) Provide appropriate sanitary facilities (separate for men and women), rest areas, and protection during pregnancy and lactation for all female workers, including ethnic minorities. Incorporate content on preventing gender-based violence,	(xi) Construction sites have separate sanitary facilities for men and women. 100% of all workers receive GBV/SEA/SH	Qinzhou Huangma Assets Management Group Co., Ltd. Assisting Entities:	Included in the construction budget

Actions	Action Measures	Monitoring Indicators	Implementing Entity	Budget and Sources
	sexual exploitation, abuse, and sexual harassment (GBV/SEA/SH) into OHS training and workplace management regulations.	prevention training. No recorded workplace GBV incidents.	Qinbei District Ethnic and Religious Affairs Bureau, Qinbei District Women's Federation, Contractors	
V. Community Health and Safety				
6. Community Health and Safety	(xii) During construction, strictly implement general mitigation measures for noise reduction, dust control, and traffic management as outlined in the Environmental and Social Management Plan. These measures benefit all community residents, including the 60 Zhuang residents and female members, ensuring the maintenance of their normal living order.	(xii) Zero valid complaints from Zhuang residents regarding construction disturbances (noise, dust, etc.).	Qinzhou Huangma Assets Management Group Co., Ltd., Contractors, Supervision Units	Included in the construction budget
7. Respect for Cultural Customs and Inclusive Communication	(xiii) Include content on respecting local ethnic customs in the induction training for construction personnel. Require construction personnel to respect local residents and refrain from discriminatory or disrespectful behavior. (xiv) Construction activities should avoid disrupting ethnic minority cultural activities in the project impact area. For example, during the Zhuang traditional festival " Sanyuesan " ² contractors should suspend construction to respect Zhuang cultural customs and ensure that Zhuang and Han residents can carry out festival celebrations normally. The construction schedule should be communicated and coordinated in advance to avoid conflicts.	(xiii) 100% of contractor workers receive training that includes respecting local customs. Zero records of conflicts or complaints arising from cultural differences. (xiv) Zero valid complaints from affected ethnic minority residents (including women) regarding disruption to cultural activities/holidays	Qinzhou Huangma Assets Management Group Co., Ltd., Contractors. Assisting Entity: Qinbei District Ethnic and Religious Affairs Bureau	Included in the construction budget and project funds

² The Sanyuesan Festival (Third Day of the Third Lunar Month) is a traditional festival of the Zhuang people and one of the items listed on the National Intangible Cultural Heritage Inventory.

Actions	Action Measures	Monitoring Indicators	Implementing Entity	Budget and Sources
VI. Grievance Mechanism				
8. Grievance Mechanism	(xv) Ensure that the established project grievance mechanism is open to all community members and project workers, including ethnic minorities and women. Widely publicize the grievance channels using easy-to-understand formats through brochures, bulletin boards, WeChat groups, etc., ensuring they can express their concerns equally and conveniently to protect their rights and interests.	(xv) Record the number of grievances (if any) from ethnic minority residents and workers, including women, and ensure they are handled and provided feedback in a timely and fair manner	Qinzhou Huangma Assets Management Group Co., Ltd., Contractors. Assisting Entities: Qinbei District Ethnic and Religious Affairs Bureau, Qinbei District Women's Federation, Community/Village (Resident) Committees	Included in the project management and relevant departments' routine expenditure budget