

GEF7

**Pathways for Decarbonizing Transport towards Carbon
Neutrality in China Project (P175561)**

Stakeholder Engagement Framework (SEF)

(Final)

NPMO at the Ministry of Transport (MOT)

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Executive Summary

The Global Environment Fund (GEF-7) has launched the Pathways for Decarbonizing Transport towards Carbon Neutrality in China Project (hereinafter, the “Project”), with the World Bank being the international implementing agency, aiming to establish national and sub-national roadmaps, enhance the national policy framework for innovation and scale-up of clean energy in transport, and pilot emerging technologies in selected provinces, to decarbonize transport towards carbon neutrality.

The Project comprises four components: 1) national roadmap and policy framework towards carbon neutrality; 2) pilot implementation towards transport carbon peaking and neutrality in selected provinces (Henan, Jiangsu and Shandong); 3) capacity building; and 4) project management, monitoring and evaluation (M&E).

The Project covers technical assistance (TA) activities of three types, for which the Terms of Reference (TOR) will be developed during implementation stage. The detailed content and scope of the TA activities will be defined during implementation. In order to manage the stakeholder engagement effectively, this Stakeholder Engagement Framework (ESF) has been prepared according to Environment and Social Standard 10 (ESS10) of the Bank’s Environment and Social Framework (ESF), laying down the principles and strategies for stakeholder engagement at the project implementation stage for the details of these TA activities.

This SEF identifies the stakeholders involved in TA activities based on the existing limited project information. Once more detailed activity information is available, stakeholders will be further screened and identified during project implementation.

For the TA activities, project-affected parties mainly include three categories: a) those affected by studies under the TA activities, mainly being fieldwork consultants and researchers; b) urban and rural residents, including low-income residents, especially those with special traffic needs, such as the disabled groups, who are unable to participate equally and effectively, and whose opinions or concerns are likely to be ignored; c) those affected by downstream activities of the TA activities, mainly including persons affected by land acquisition (LA) and/or house demolition (HD); urban and rural residents; workers (including direct workers, contracted workers and primary supply workers), communities and residents affected by transport facility operation (including ethnic minority residents); some enterprises and workers, including highway passenger and freight transport enterprises, logistics enterprises, travel agencies, passenger stations, enterprises in automotive raw material, parts and vehicle industries, etc.

In particular, vulnerable groups under the TA activities mainly include the following three categories: a) urban and rural low-income residents, the disabled, ethnic minority residents, etc.; b) rural and ethnic minority residents affected by LA, HD and/or restrictions on land use during the construction and operation of the facilities; and c) contracted workers affected by working conditions and occupational health and safety (OHS) during the construction and operation of the facilities construction or manufacturing; d) vulnerable groups in nearby community residents affected by noise, dust, waste gas, wastewater, construction camps, fires, explosions, chemical leakage, traffic accidents, etc. during construction and operation, and e) small enterprises and workers affected by downstream activities, who may become unemployed during enterprise transformation. Other interested parties mainly include relevant ministries, provincial and local authorities in charge of project decision-making and implementation, TA contractors, manufacturing enterprises, industry associations, research institutes, NGOs, news media, etc.

At the preparation stage, the National Project Management Office (NPMO) at the Ministry of Transportation (MOT) conducted preparatory stakeholder engagement and consultation together with the provincial project management offices (PPMOs), including information disclosure and consultation with the relevant ministries, etc., discussing the Project's scope, stakeholder identification, environmental and social (E&S) risk analysis, management procedures, etc. meaningfully.

On the basis of preliminary stakeholder identification and analysis, this SEF defines the responsibilities of the NPMO, PPMOs, and TA contractors at different stages of the TA activities (preparation, research and review), lays down strategies for information disclosure and stakeholder engagement, including key points and methods, and proposes requirements for the external communication and monitoring mechanisms of the Project.

In particular, this SEF proposes stakeholder engagement requirements for the TA activities. Although the studies under the TA activities will not generate direct substantial E&S risks, the application and implementation of feasibility study, operation plans, technical design and other research output may involve extensive stakeholders and generate substantial E&S risks. It is important to start stakeholder engagement as early as possible. Therefore, at the preparation stage, stakeholder engagement requirements are defined in the Terms of Reference (TORs); before the start of the studies, detailed and feasible stakeholder engagement arrangements will be proposed (as part of the work plans if possible), and stakeholder engagement activities conducted at the research stage; at the review stage, extensive consultation on research output will be conducted with stakeholders for improvement.

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Acronyms

CNY	Chinese Yuan
ESS	Environmental and Social Standard
EIA	Environmental Impact Assessment
E&S	Environmental and Social
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESMS	Environmental and Social Management System
ESS	Environmental and Social Standard
GHG	Greenhouse Gas
GRM	Grievance Redress Mechanism
HD	House Demolition
LA	Land Acquisition
LMP	Labor Management Plan
MOT	Ministry of Transport
NPMO	National Project Management Office
OHS	Occupational Health and Safety
PRC	People's Republic of China
RAP	Resettlement Action Plan
PPMO	Provincial Project Management Office
PSC	Project Steering Committee
SEF	Stakeholder Engagement Framework
SEP	Stakeholder Engagement Plan
TA	Technical Assistance
TORs	Terms of Reference
USD	US Dollar

Units

Currency unit	=	Yuan (CNY)
US\$1.00	=	RMB6.56
1 hectare	=	15 mu

1 Introduction

1.1 Background

China's rapid economic growth accompanied by structural and spatial transformation has led to a sharp rise in greenhouse gas (GHG) emissions in energy use. As the largest GHG emitter of the world, China has updated its climate commitment in the latest National Determined Contribution (NDC), pledging to peak its carbon emissions by 2030 and achieve carbon neutrality by 2060.

Transport is the main contributing sector of China's GHG emissions. With the increase of revenue, the progress of urbanization and mechanization, and the construction of infrastructure, China's freight and passenger volumes will keep growing rapidly. GHG emissions in this sector grow the fastest among all sectors, making carbon reduction in this sector highly challenging.

In recent years, the state and competent authorities have promulgated policies on giving priority to public transit development and implementing carbon reduction measures in the transport sector, and the development of new energy and intelligent connected vehicles has been included in the 14th five-year plans and 2035 visions of many provinces and municipalities. During the 14th five-year plan period, the proportion of green transport will rise significantly, clean and low-carbon means of transport will be applied extensively, the energy consumption per unit of turnover will drop significantly, and carbon emission intensity will decline steadily. The goal is to reduce the carbon emission intensity of transport by 5% by 2025.

Since the beginning of the 21st century, China has used GEF grants to implement a series of projects through cooperation with the Bank, promoting the development of the transport sector effectively. In 2022, the MOT plans to apply for a GEF grant of \$10.09 million to implement the Project to promote the decarbonization of the transport sector and realize China's carbon goal.

1.2 Description of the Project

The Project aims to establish national and sub-national roadmaps, enhance the national policy framework for innovation and scale-up of clean energy in transport, and pilot emerging technologies in selected provinces, to decarbonize transport towards carbon neutrality. The gross investment in the Project is \$10.09 million of GEF grant. The Project comprises the following three components. See **Table 1-1** and **Figure 1-1**.

Component 1: National transport carbon neutrality roadmap and policy framework (GEF grant \$3.44 million): supporting the realization of the national roadmap of carbon peaking by 2030 and carbon neutrality by 2060 in the transport sector

Component 2: Pilot Implementation towards Transport Carbon Peaking and Neutrality in Selected Provinces (GEF grant \$5.65 million): Based on consistency with the project objectives, potential contribution to the decarbonization target, and reproducibility, the Bank and the MOT have jointly reviewed the proposals submitted to the MOT, and selected three demonstration provinces (Henan, Jiangsu and Shandong) for pilots.

Component 3: Capacity building (GEF grant \$400,000): strengthening knowledge exchange and capacity building in transport decarbonization innovation, and supporting project extension and knowledge management

Component 4: Project management, M&E (GEF grant \$601,743): support the NPMO and three PPMOs regarding to project management and M&E.

Table 1-1 Proposed Project Activities

No.	Topic	Main activities	Type ¹
Component 1: National Roadmap and Policy Framework towards Carbon Neutrality			
1A	Develop a roadmap for transport decarbonization.	1.1.1 Study on China's strategic pathways and promotion mechanisms for green and low-carbon transport development	TA2
		1.1.2 Study on strategic pathways for in-depth emission reduction of non-operating vehicles	
		1.1.3 Study on the development of green energy facilities along highways	
		1.1.4 Study on measures for the integrated development of multiple transport modes in the context of carbon peaking carbon neutrality	
		1.1.5 Study on carbon emission reduction potential and costs for transport	
1B	Develop a national framework of policies and technical standards for decarbonizing transport.	1.2.1 Study on the simulated policy evaluation and standard system for green and low-carbon development	TA2
		1.2.2 Study on the list of technical requirements for the green and low-carbon development of highway transport	
		1.2.3 Study on the list of technical requirements and standards for the green and low-carbon development of water transport	
1C	Develop accounting and evaluation framework for transport emissions.	1.3.1 An assessment of the existing statistical system on transport demand, energy consumption, and carbon emissions, improvement of the accounting and monitoring mechanism,	TA2
		1.3.2 Designing an institutional arrangement for data collection and monitoring between different levels of government.	
Component 2: Pilot Implementation towards Transport Carbon Peaking and Neutrality in Selected Provinces			
2A	Shandong	Development of a roadmap and strategy for transport decarbonization in support of carbon peaking for Shandong Province	TA2
		Development of technical guides on hydrogen fuel cell electric vehicle (FCEV) buses, through a comprehensive evaluation of the economic, technical, operational, and environmental impacts of the ongoing FCEV bus pilot	TA2
		Development and demonstration of near zero-emission strategy for Shandong Ports	TA2
		Demonstration of energy efficiency improvement and clean energy use for inland waterway vessels, supporting research and development (R&D) of portable power units for electric vessels	TA1
2B	Henan	Development of a roadmap and strategy for transport decarbonization in support of carbon peaking for Henan Province	TA2
		Demonstration of integrated rural-urban electric transport, across passenger, freight, and logistics services, including preparation of a feasibility study, development of operating plans, and development of an architecture design and system requirements of a mobile platform for integrated rural-urban passenger and freight services in selected Counties	TA1
		Demonstration of near zero bus depots in Xin County, supporting a technical study on the development of near-zero emission depots, terminals and interchanges, covering energy conservation building design, green and recyclable construction materials and renewable energy usage and storage.	TA2
2C	Jiangsu	Development of a roadmap and strategy for transport decarbonization in support of carbon peaking for Jiangsu Province	TA2
		Technical assistance for establishment of a green mobility platform	TA2
		Development and demonstration of near zero-emission strategy for Yancheng Port, including renewable energy integration and storage as	TA2

¹ According to the Advisory Note Technical Assistance, and the Environmental and Social Framework, TA activities are grouped into three broad categories: TA1 - Supporting the preparation of future investment projects (whether or not funded by the Bank); TA2 - supporting the formulation of policies, programs, plans, strategies or legal frameworks; and TA3 -Strengthening borrower capacity.

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No.	Topic	Main activities	Type ¹
		well as integrated hydrogen generation and refueling.	
Component 3: Capacity building			
3A	Capacity building	(i) knowledge exchange and study tours on transport innovations for decarbonization, (ii) workshops and trainings, and (iii) knowledge management activities. Under the Project, knowledge on decarbonization strategies, policies, and technologies, as well as the carbon accounting and monitoring mechanism at national and pilot province levels, will be created from technical assistance (TA) and pilot implementation.	TA3
Component 4: Project management and M&E			
4A	Project management and M&E	(i) carry out day-to-day management of the project, including procurement, financial management, environmental and social management; and (ii) monitor and evaluate (M&E) the different parts of the Project, including M&E of GHG emission reduction of pilot projects, and produce regular monitoring reports, Mid-Term Review (MTR) review report, and Implementation Completion and Results (ICR) report at the end of the project.	TA3

As shown in Table1-1, the project consists of only technical assistance (TA) activities of three types at national level and in three pilot provinces, which include:

- TA Type 1-Supporting the preparation of future investment project, including:
 - a) preparation of a feasibility study, operating plans, an architecture design and system requirements of a mobile platform for integrated rural-urban passenger and freight service in selected counties of Henan province, which will support establishment and operation of mobile platforms for “supply-demand” match.
 - b) R&D of prototype portable power units for electric vessels in Shandong Province, which is likely to be carried out by an existing manufacturer.
- TA Type 2-Supporting the formulation of policies, programs, plans, strategies or legal frameworks, including:
 - a) transport decarbonization roadmaps development for China and three pilot provinces.
 - b) studies on national policy framework and technical standards for transport decarbonization, and transport emissions monitoring, accounting, and evaluation framework.
 - c) technical evaluation and guidelines development for Shandong province’s ongoing hydrogen fuel cell electric bus pilot.
 - d) study on near zero emission strategy for Shandong Ports and Yancheng Port operation, including identification of financially viable clean energy sources, new technologies and policy measures for near zero-carbon ground and waterborne transport.
 - e) technical studies on a green mobility platform in Jiangsu province, including green mobility indicators, a data monitoring system, province-wide Monitoring, Reporting and Verification (MRV) system, framework for Mobility-as-a-Service (MaaS), and green mobility credit.
 - f) technical study on near-zero emission depots, terminals and interchanges in Xin County of Henan Province.
- TA Type 3-Strengthening borrower capacity: capacity building and project management and monitoring supports under Component 3 and 4.

1.3 Institutional Arrangements

The final organizational structure will be determined by the completion of the project appraisal, and an assumption for it is given below:

- **MOT:** being the executing agency of the Project
- **NPMO:** The NPMO under the MOT will be responsible the routine management of the Project, including liaison with the Bank, coordination of pilots, technical preparation for the national component, output quality control, procurement management, financial management, environmental and social performance monitoring and project implementation of Components 1, 3 and 4.
- **PPMOs:** The PPMOs have been set up at the transport departments of Henan, Jiangsu and Shandong Provinces, responsible for the routine management of the provincial activities.
- **PSC:** A Project Steering Committee (PSC) will be established at the national level, providing overall guidance and coordination, composed of members from the Ministry of Finance, the Comprehensive Planning Department of the MOT, and the transport departments of the pilot provinces.

1.4 Objectives

This SEF applies to all activities at the national and provincial levels. According to the Bank's ESF and ESS10, stakeholder engagement is an inclusive process that runs through the project lifecycle. The proper design and implementation of this process is critical to managing E&S risks of the TA activities.

The main objectives of this SEF are:

- Identifying and analyzing stakeholders based on existing information to guide the establishment of a systematic approach to subsequent stakeholder engagement for the activities;
- Defining the stakeholder engagement responsibilities, strategies and methods of the NPMO, PPMOs, and TA contractors at different stages (preparation, research and review) of the studies under the TA activities;
- Establishing external communication mechanisms, and defining GRM and monitoring mechanism establishment requirements for the TA contractors about to implement the activities.

2 Stakeholder Analysis

2.1 Stakeholder Identification

Decarbonization in the transport sector involves numerous and complex stakeholders. According to the Bank's ESS10 and the Project's characteristics, the Project's stakeholders include: project-affected parties, other interested parties and vulnerable groups. Project-affected parties are individuals or groups affected or potentially affected by the Project, including those affected directly and indirectly. Other interested parties are individuals or groups potentially interested in the Project. Vulnerable groups refer to those more likely to be affected adversely during project preparation, implementation and operation due to personal vulnerabilities, including gender, age, identity, workplace environmental impacts, etc.

Since the Project was still at the preparation stage when this SEF was prepared, and the activities have not been defined, it is impossible to conduct comprehensive and detailed stakeholder identification and engagement demand analysis at present. Once more detailed activity information is available, stakeholders will be identified in more detail during project implementation.

2.1.1 Type 1 TA Activities

The stakeholders of Type 1 TA activities mainly include:

a) Project-affected parties

The project-affected parties involved in such project activities include those affected by the feasibility studies or technical designs under the Type 1 TA activities, and those potentially affected by future investments supported by the Type 1 TAs, including:

Impacts of the study under the TA activities: The affected stakeholders involved in such project activities are mainly influenced by the feasibility and design work itself. The environmental and social risks of these activities are relatively small. In the process of feasibility research and design, field work is involved, which may lead to risks of traffic accidents, drowning, local infectious diseases spreading (including COVID-19).

Potential risks of future investments supported by Type 1 TA: If those feasibility studies or technical designs are implemented, they will bring environment and social impacts and risks.

Based on the current information, the Type 1 TA activities will support the following activities:

- preparation of a feasibility study, operating plans, an architecture design and system requirements of a mobile platform for integrated rural-urban passenger and freight service in selected counties of Henan province.
- R&D of prototype portable power units for electric vessels in Shandong Province.

The current two Type 1 TAs will locate on existing land holdings, and will not be located in any ethnic minority community, or any area where ethnic minority community is collectively attached to. During implementation, the project may include additional Type 1 TAs supporting feasibility study or technical design of future physical investments such as BESS and hydrogen facility, which may have risks of LAR and on ethnic minorities.

These civil works are not expected to cause large labor influx, so the risks of communicable disease spread and sexual exploitation and abuse and sexual harassment (SEA-SH) associated with labor influx are considered low.

The construction/operation of hydrogen production and refueling stations, and manufacturing of power units, may pose health and safety risks to laborers and nearby communities, such as those arising from hydrogen leakage, fires and explosions, etc., and those arising from disturbances and traffic accidents.

Equipment purchase will not have any substantial risk, and main risks are safety risks during equipment installation. However, there will be risks during operation (including OHS risks, and

community health and safety risks), including fires and explosions of hydrogen fuel cell vehicles, safety risks of hydrogen storage and refueling equipment, and spontaneous battery combustion risks.

The building of information platforms will have no major risk, but there will be security risks in data collection and use for urban and rural residents. Massive transport data contains massive personal information, which is collected, transmitted, stored, and analyzed online, and may be leaked due to hacker attacks, resulting in information security risks.

Therefore, the project-affected parties of the downstream activities include:

- Direct workers, contracted workers;
- Persons affected by LA and/or HD, including ethnic minorities
- Facilities surrounding communities and residents;
- Urban and rural residents

b) Other interested parties

Other stakeholders include:

- Ministry of Transport and NPMO,
- PPMOs;
- Provincial government departments: including National Development and Reform Commission, Planning and Natural Resources Department, Ministry of Industry and Information Technology, Ecological environment Department, Emergency management department, State Market supervision and administration and others;
- County/district government departments in charge of the implementation of the activities;
- Sub-district offices / township governments and Community / village committees
- Design agency;
- NGOs (including industry associations and NPOs);
- Contractors;
- Primary suppliers;
- local media, etc.

See Table 2-1 for the identification and analysis of the stakeholders of Type 1 TA activities.

Table 2-1 Identification and Analysis of Stakeholders Involved in Type 1 TA Activities

	Stakeholder	Influence on the Project	Impacts by the Project
Project-affected parties	Impacts of the study under the TA activities		
	Researchers	Playing a critical role in the subproject feasibility study or technical design	They may be faced with OHS impacts.
	Potential risks of future investments supported by Type 1 TA		
	Direct, contracted and primary supply workers	Playing an important role in successful project construction and operation	They may be exposed to OHS impacts (e.g., potential leakage, fire and explosion risks during the construction and operation of energy storage facilities and hydrogen refueling stations) during project construction and operation. Contracted workers may also be affected by working conditions, and primary supply workers (e.g., battery manufacturers and recyclers involved in energy storage activities) may also be exposed to severe safety risks.

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Stakeholder		Influence on the Project	Impacts by the Project
	Persons affected by LA and/or HD, including ethnic minorities	Their participation and support is the foundation for the successful implementation of such TA activities.	LA and/or HD risks
	Facilities surrounding communities and residents	Their support is the foundation for successful project implementation.	They may be subject to community health and safety impacts due to fires and explosions during the construction and operation of energy storage facilities and hydrogen refueling stations.
	urban and rural residents	Their participation and support is the foundation for the successful implementation of such TA activities.	The upgrading of passenger, freight and logistics stations, and the replacement with new energy vehicles may increase traffic costs for urban and rural residents; information platform building may involve security risks.
Other interested parties	MOT and NPMO	Overall project coordination and management	The Project has no significant negative impact on them.
	Provincial transport departments and PPMOs	Coordination and management of provincial activities	The Project has no significant negative impact on them.
	County/district government departments in charge of the implementation of the activities	Approving, supervising the implementation and operation of those downstream activities of the activities	The Project has no significant negative impact on them.
	Sub-district offices / township governments; community / village committees	Organizing and coordinating community work, handling grievances of community residents, etc., for those downstream activities of the activities	The Project has no significant negative impact on them.
	TA contractors	Responsible for project feasibility study and technical design	Needs of stakeholders, and E&S risks and impacts should be considered in project design.
	NGOs (including industry associations and NPOs)	Giving advice on project design, and supervising project implementation to some extent	The Project has no significant negative impact on them.
	Contractors	Constructing basic facilities and installing equipment	Implementing policies on labor management, working conditions and OHS as required by the PPMOs, and handling grievances from nearby communities during construction
	Primary suppliers	Supplying materials, equipment, etc. for the Project	Implementing policies on labor management, working conditions and OHS as required by the PPMOs
	Local media	Giving publicity on the Project and related policies	The Project has no significant negative impact on them.

c) Vulnerable groups

Based on preliminary identification, the potential vulnerable groups affected by downstream activities of the Type 2 TA activities mainly include i) contracted and primary supply workers affected by working conditions and OHS during the construction, manufacturing and operation of the downstream activities, iii) vulnerable groups in nearby community residents affected by noise, dust, waste gas, wastewater, construction camps, fires, explosions, chemical leakage, traffic accidents, etc. during construction, manufacturing and operation, and iv) urban and rural low-income residents, the disabled, etc. (see Table 2-5). They may be blue-collar workers with limited occupational skills, or live in underdeveloped remote mountain areas with limited livelihoods and information sources. They are likely to be excluded from the Project during construction and operation, and exposed disproportionately to potential downstream risks and impacts.

Table 2-2 Identification and Analysis of Vulnerable Groups Involved in Type 1 TA Activities

Vulnerable group	Influence on the Project	Impacts by the Project
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Vulnerable group	Influence on the Project	Impacts by the Project
Contracted and primary supply workers	Minor	During construction, manufacturing and operation, contracted workers are exposed to working conditions and OHS risks and impacts; primary supply workers may be exposed to severe safety risks.
Rural and ethnic minority residents affected by LA and/or HD	Minor	The application of research output may lead to restrictions on land use, and livelihood changes.
Vulnerable groups in facilities surrounding communities (including the poor, the disabled, lonely old people, etc.)	Minor	They may be affected by noise, dust, waste gas, wastewater, construction camps, fires, explosions, chemical leakage, traffic accidents, etc. during construction and operation.
Urban and rural low-income residents, the disabled	Minor	They may be unable to share the project benefits due to inadequate participation, and even suffer from increased traffic costs or inconvenience.

2.1.2 Type 2 TA Activities

The stakeholders of Type 2 TA activities mainly include:

a) Project-affected parties

The project-affected parties involved in such project activities include those affected by the studies under the TA activities, and those potentially affected by downstream activities such as the application of research output under the TA activities, including:

Impacts of the studies under the TA activities: These studies do not involve physical construction, and have minor E&S risks themselves. The MOT and provincial transport departments have established sound human resources management systems, policies and procedures, and the PMO staff is composed of civil servants, with low labor and working condition risks. The researchers of the TA contractors are senior technicians, who are well protected by the applicable state laws and regulations, with low labor and working condition risks. Based on the nature of such studies, the TA activities have two types of risks: 1) potential travel safety and health risks during fieldwork (including COVID-19), and failure to pay sufficient travel subsidies; 2) During research, groups with inadequate stakeholder engagement and vulnerable groups (including urban and rural low-income residents, especially those with special traffic needs, such as the disabled) are unable to participate equally and effectively, and their opinions or concerns are likely to be ignored.

Potential risks of downstream activities such as the application of research output under the TA activities: For the Type 2 TA activities, since such research output are adopted and implemented, they may trigger downstream activities, and increase infrastructure investment, such as road or bridge reconstruction, construction of renewable energy power generation, storage and transmission facilities, construction or upgrading of passenger and freight logistics centers, bus stops, hydrogen refueling stations and charging piles, etc., thereby generating E&S risks and impacts:

- **LA and/or HD risks and impacts:** The construction of infrastructure will lead to LA and/or HD risks and impacts;
- **Safety risks:** The extensive construction of hydrogen refueling stations, charging piles and energy storage facilities, and the use of new energy vehicles (EVs, hydrogen fuel cell buses, etc.) may pose **road traffic safety risks**, and such risks as hydrogen leakage, spontaneous battery combustion, fires and explosions, thereby leading to **OHS risks and impacts for workers (including workers and new energy vehicle drivers at facilities, etc.), and community health and safety risks and impacts.**
- **Exclusive risks of vulnerable groups:** Changes in transport modes (public transport, active transport, shared transport, etc.), and the optimization of roads, urban slow traffic systems and logistics infrastructure may change residents' daily lives, including consumption, traffic

and travel modes. If needs of vulnerable groups (including low-income residents, old people, the disabled, ethnic minority residents, etc.) are not considered in policy making, infrastructure design and pricing, they may suffer from increased traffic costs or inconvenience.

- **Increased operating pressure on some enterprises during transformation:** Due to transport mode changes, low carbon requirements and new energy vehicle purchase, highway passenger and freight transport enterprises, logistics enterprises, travel agencies, passenger stations, etc. will be faced with increased operating pressure at the early stage of transformation; the use of low carbon technology, the replacement of electricity, and the adjustment to the transport structure may impose higher production costs on enterprises in automotive raw material, parts and vehicle industries, etc., thereby affecting their business operations. Some parts enterprises making primary labor-intensive and low-added value products mainly will have greater difficulties. This may lead to the workers' unemployment.
- **Security risks in big data collection and use:** Massive transport data contains massive personal information, which is collected, transmitted, stored and analyzed online, and may be leaked due to hacker attacks, resulting in information security risks.

In consideration of China's comprehensive regulations on labor protection and intensifying labor inspections by local authorities, forced and child labor risks of contracted or primary supply workers are low.

Therefore, the project-affected parties of these project activities mainly include:

- **Persons affected by LA and/or HD;**
- **Urban and rural residents:** including vulnerable groups, e.g low-income residents, old people, women, the disabled, ethnic minority residents, etc.;
- **Workers affected by the construction and operation of transport facilities:** including workers and new energy vehicle drivers at facilities, etc.;
- **Communities and residents affected by transport facility operation (including ethnic minority residents);**
- **Some enterprises and workers:** including highway passenger and freight transport enterprises, logistics enterprises, travel agencies, passenger stations, etc.; enterprises in automotive raw material, parts and vehicle industries, etc.

b) Other interested parties

Other interested parties mainly include:

- MOT and NPMO;
- Provincial transport departments and PPMOs;
- Relevant ministries, provincial governments and relevant decision-making authorities: including the National Development and Reform Commission, Ministry of Finance, highway / railway / civil aviation / maritime administrations (affiliated to the MOT), Ministry of Industry and Information Technology, Ministry of Natural Resources, Ministry of Ecology and Environment, Ministry of Public Security, Ministry of Housing and Urban-Rural Development, Ministry of Emergency Management, State Administration for Market Regulation, and other competent decision-making authorities, and 4 provincial governments;
- NGOs, including industry associations (e.g., China Communications and Transportation of Association, China Association of Automobile Manufacturers, Research Institute of Civil Aviation Airport Environment, China Air Transport Association), NPOs (e.g., Marine Environment Protection Committee (MEPC), World Wildlife Fund, Greenpeace, The Nature Conservancy (TNC)), etc.;

- TA contractors;
- Other research institutes;
- News media, etc.

See Table 2-3 for the stakeholder identification and analysis of the Type 2 TA activities.

Table 2-3 Identification and Analysis of Stakeholders Involved in Type 2 TA Activities

	Stakeholder	Influence on the Project	Impacts by the Project
Project-affected parties	Impacts of the studies under the TA activities		
	Researchers	Playing a critical role in research under the Project	They may be faced with OHS impacts.
	The public	Minor	They may be unable to share the project benefits due to inadequate participation, and even suffer from increased traffic costs or inconvenience.
	Potential impacts of downstream activities such as the application of research output under the TA activities		
	Persons affected by LA and/or HD	Their participation and support is the foundation for the successful implementation of such TA activities.	LA and/or HD risks
	urban and rural residents	Their participation and support is the foundation for the successful implementation of such TA activities.	Changes in transport modes, and the optimization of roads, urban slow traffic systems and logistics infrastructure may change residents' daily lives, including consumption, traffic and travel modes. If their needs are not considered in policy making, infrastructure design and pricing, they may suffer from increased traffic costs or inconvenience. There are also information security risks.
	Workers affected during facility construction and operation	Their participation and support is the foundation for the successful implementation of such TA activities.	Such risks as hydrogen leakage, spontaneous battery combustion, fires and explosions may occur during the construction and operation of hydrogen refueling stations, charging piles and energy storage facilities, thereby leading to OHS risks and impacts for workers.
	Communities and residents affected by transport facility operation	Their participation and support is the foundation for the successful implementation of such TA activities.	The extensive construction of hydrogen refueling stations, charging piles and energy storage facilities, and the use of new energy vehicles (EVs, hydrogen fuel cell buses, etc.) may pose road traffic safety risks, and such risks as hydrogen leakage, spontaneous battery combustion, fires and explosions.
	Some enterprises and workers	Their participation and support is the foundation for the successful implementation of such TA activities.	Due to transport mode changes, low carbon requirements and new energy vehicle purchase, these enterprises will be faced with increased operating pressure at the early stage of transformation. Some parts enterprises making primary labor-intensive and low-added value products mainly will have greater difficulties.
	Other interested parties	MOT and NPMO	Responsible the routine management of the Project, including liaison with the Bank, coordination of pilots, technical preparation for the national component, output quality control, procurement

Stakeholder	Influence on the Project	Impacts by the Project
	management, financial management, environmental monitoring and project implementation	
Provincial transport departments and PPMOs	Responsible the routine management of the provincial activities, including technical preparation for the national component, output quality control, procurement management, financial management, environmental monitoring and project implementation	The Project has no significant negative impact on them.
PSC	Providing overall guidance and coordination	The Project has no significant negative impact on them.
Relevant ministries, provincial governments and relevant decision-making authorities	Developing relevant techniques, routes, mechanisms, policies, standards, etc.	The decision-making process is faced with inter-provincial and inter-sector coordination difficulty.
NGOs, including industry associations, NPOs, etc.	Supporting the studies under the TA activities, and giving advice on techniques, routes, mechanisms, policies, etc.	The Project has no significant negative impact on them.
TA contractors	Implementing the policy TA activities, and giving professional advice on techniques, routes, mechanisms, policies, etc.	They should consider stakeholder needs in research, analyze E&S risks and impacts, and reflect them in research output.
Other research institutes	Supporting the studies under the TA activities, and giving advice on techniques, routes, mechanisms, policies, etc.	The Project has no significant negative impact on them.
News media	Conducting publicity and education on transport decarbonization in diversified forms	The Project has no significant negative impact on them.

c) Vulnerable groups

Based on preliminary identification, the Project's potential vulnerable groups mainly include low-income residents, old people, women, the disabled, ethnic minority residents, etc. in urban and rural residents, rural and ethnic minority affected by downstream activities involved in the studies under the TA activities, and some workers (especially contracted workers), who may be exposed to OHS risks during facility construction and operation, or become unemployed during enterprise transformation, as shown in Table 2-4. They may be blue-collar workers with limited occupational skills, old people or disabled who have difficulty moving about, or those living in underdeveloped remote mountain areas with limited livelihoods and information sources. Their opinions or concerns are likely to be ignored, and they may be exposed disproportionately to potential downstream risks and impacts.

Table 2-4 Identification and Analysis of Vulnerable Groups Involved in Type 2 TA Activities

Vulnerable group	Influence on the Project	Impacts by the Project
Rural and ethnic minority residents affected by LA and/or HD	Minor	The application of research output under the TA activities may lead to restrictions on land use, and livelihood changes.
Low-income residents, old people, women, the disabled, ethnic minority residents, etc. in urban and rural residents	Minor	They may be unable to share the project benefits due to inadequate participation, and even suffer from increased traffic costs or inconvenience.

Vulnerable group	Influence on the Project	Impacts by the Project
Some workers, especially contracted workers	Minor	They may be exposed to OHS risks during facility construction and operation, or become unemployed during enterprise transformation.

2.1.3 Type 3 TA Activities

The project activities under Components 3 and 4 are **Type 3 TA** activities, mainly including project M&E, training, workshops, visits, project publicity and extension, project management, and other capacity building activities. The stakeholders involved mainly include the PMOs, TA contractors, etc., which have great importance for and influence on the Project.

2.2 Stakeholder Demand Analysis

Different stakeholders have different needs for the Project.

2.2.1 Type 1 TA Activities

Table 2-5 analyzes the participation needs of the project-affected parties and other interested parties of the activities.

Table 2-5 Stakeholder Engagement Demand Analysis of Type 1 TA Activities

Stakeholder	Participation demand	
Project-affected parties	Designers and researchers	There are sound measures to ensure their health and safety during business trips and fieldwork.
	Direct, contracted and primary supply workers	Conduct information disclosure and attend worker FGDs at the preparation, construction and operation stages to learn potential OHS impacts and risks, and mitigation measures, and ensure that proposed comments and suggestions are incorporated into relevant actions; for major safety concerns, introduce procedures and mitigation measures; offer a flexible GRM to address worker concerns and needs.
	Persons affected by LA and/or HD	Information disclosure and meaningful consultation should be conducted with them at the pre-feasibility study stage to collect their needs and suggestions, and optimize the project design. Information disclosure and meaningful consultation should be conducted during LA and/or HD to collect their needs and suggestions, and give feedback timely.
	Nearby communities and residents	Notify the scope and schedule of the Project, potential risks and mitigation measures through regular information disclosure and public participation at the preparation, construction and operation stages; offer a flexible GRM, collect comments and suggestions from community residents, and offer feedback and solutions timely.
	The public	Notify the scope and schedule of the Project through regular information disclosure and public participation at the preparation, construction and operation stages; offer a flexible GRM, collect comments and suggestions from community residents, and offer feedback and solutions timely.
Other interested parties	MOT and NPMO	Ensure successful project implementation.
	Provincial transport departments and PPMOs	Ensure successful project implementation.
	County/district government departments in charge of the implementation of the activities	Learn the Project's compliance by appropriate means, and ensure successful project implementation

Stakeholder		Participation demand
	Sub-district offices / township governments; community / village committees	Assist the project manager in holding a meeting for community residents at the construction and operation stages, and serve as a bridge between community residents and the project manager or competent authorities.
	TA contractors	Learn stakeholder needs by means of survey, seminar, FGD, interview, etc., and optimize the project design on this basis.
	NGOs (including industry associations and NPOs)	Involve NGOs at the design, construction and operation stages to collect their comments or suggestions.
	Contractors	Establish a GRM for workers and nearby community residents to address their concerns and needs.
	Primary suppliers	Establish a GRM for workers to address their concerns and needs.
	Local media	Fully utilize local media to disclose project information and documents.

2.2.2 Type 2 TA Activities

Table 2-5 analyzes the participation needs of the project-affected parties and other interested parties of the activities.

Table 2-6 Stakeholder Engagement Demand Analysis of Type 2 TA Activities

Type	Stakeholder	Participation demand analysis
Project-affected parties	Researchers	There are sound measures to ensure their health and safety during business trips and fieldwork.
	Persons affected by LA and/or HD	Information disclosure and meaningful consultation should be conducted with them at the pre-feasibility stage to collect their needs and suggestions, and optimize the project design. Information disclosure and meaningful consultation should be conducted during LA and/or HD to collect their needs and suggestions, and give feedback timely.
	Urban and rural residents	During the studies under the TA activities, their ideas, concerns and needs on transport structure, green transport, urban slow traffic system planning, policies, etc. should be collected and considered.
	Workers affected by the construction and operation of transport facilities	Information disclosure and meaningful consultation should be conducted for them during the studies under the TA activities, and their needs considered in research output.
	Communities and residents affected by transport facility operation	Information disclosure and meaningful consultation should be conducted for them during the studies under the TA activities, and their needs considered in research output.
	Some enterprises and workers	Information disclosure and meaningful consultation should be conducted for them during the studies under the TA activities, and their needs considered in research output.
Other interested parties	MOT and NPMO	Ensure successful project implementation.
	Provincial transport departments and PPMOs	Ensure successful project implementation.
	Relevant ministries, provincial governments and relevant decision-making authorities	Ensure that project implementation complies with the applicable laws and regulations, double carbon goal, and green transport development plan, and establish an effective cross-regional and cross-sector communication mechanism.
	TA contractors	Learn stakeholder needs and suggestions by means of survey, seminar, FGD, interview, etc., and complete the studies under the TA activities on this basis.
	NGOs, including industry associations and NPOs	Learn understandable project information through available channels, fully consult NGOs, research institutes, the public, etc.
	Research institutes	during studies on policies, plans, techniques, etc., and give feedback

Type	Stakeholder	Participation demand analysis
	The public	on stakeholder needs and concerns timely.
	News media	Participate key information disclosure activities, public meetings, hearings, etc.

2.2.3 Type 3 TA Activities

The capacity building activities (Type 3 TAs) will be held either virtually or in existing buildings following domestic COVID-19 guidelines, thus will not have direct physical footprints on a certain geographic location requiring E&S assessment of the intended activities. The main requirement of the key stakeholders of Type 3 TA activities is that the training programs are designed in the manner of time and place-friendly with cultural appropriateness and the COVID-19 spread risk can be effectively managed and controlled.

2.3 Engagement Demand Analysis of Vulnerable Groups

Vulnerable groups that may be involved in the Project are poorly educated or live in remote areas, and are unfamiliar with intelligent means of living (e.g., rarely using smart phones, Web and other new media). They are likely to be excluded and bear disproportionate losses, and unable to fully participate in the consultation process.

Therefore, their participation needs differ greatly from those of other stakeholders, including:

- Face-to-face communication is preferred;
- An understandable language should be used at information disclosure and consultation meetings;
- Times and venues of consultation meetings should be selected in consideration of their availability;
- In the TA activities, negative impacts of technical standards, policies and project implementation on them should be considered, and feasible mitigation measures taken, including compensation mechanism, reemployment assistance, etc.

Downstream activities of the national TA activities may pose potential social risks and impacts to ethnic minority residents, such as LA, labor and working conditions, OHS, and community health and safety. In addition, the adjustment of transport structure and layout may affect their transport habits. For ethnic minority residents, their needs in language, culture, identity, customs, etc. should also be considered.

3 Summary of Prior Stakeholder Engagement Activities

3.1 Completed Stakeholder Engagement Activities

At the preparation stage, the NPMO conducted engagement activities with the relevant ministries, competent authorities, industry experts, E&S experts and representative enterprises in the 4 provinces, with focus on the research scope of the TA activities, potential E&S risks, preliminary stakeholder identification, and mitigation measures for E&S risks. Due to COVID-19, the above activities were conducted by means of videoconference, telephone, WeChat, etc. mainly. See Table 3-1 for details.

Based on the prior stakeholder engagement findings, the findings and suggestions are as follows:

- Transport decarbonization involves numerous and complex stakeholders. For the TA activities, stakeholder engagement should be conducted as early as possible, and throughout the project lifecycle;
- The studies under the Type 1 TA activities will not generate substantial E&S risks. The downstream activities of the activities have impacts which are medium in magnitude based on preliminary identification, especially in OHS, community health and safety, etc. E&S audits will be carried out on the existing facilities and candidate manufacturer prior to implementing the TA activities to identify their historical performance and compliance, and proposes appropriate measures and actions to mitigate the areas of concern if any. For those activities, special attention should be paid to suggestions on E&S risk management in the feasibility study and technical design of those activities;
- The studies under the Type 2 TA activities will not cause any direct adverse E&S impacts except moderate OHS risk to workers conducting field investigations. The TAs, however, will involve significant stakeholder engagement and have downstream E&S impacts during the implementation of the products/outcomes of TAs. The significance of the E&S risks and impacts will vary by the type, location, and scale of the downstream activities. Although the majority of the impacts are predictable, reversible, localized, and readily avoided/mitigated, the spatial extent is large, and there could be cumulative impacts from collectively significant downstream activities taking place over a period of time in a region. Attention should be paid to activities incorporate suggestions on E&S risk management into the final research output; and the research output under the TA activities should be improved by various means;

3.2 Completed Information Disclosure Activities

At the preparation stage, the E&S experts completed the draft E&S documents based on the comments and suggestions from the above activities.

The draft ESMF, ESCP and SEF have been disclosed on the official websites of <https://www.jtzyzg.org.cn/LTPU/LEAP/home/html/newsDetail.html?newsid=1b52ec35538a460784cc69a763ea6fee&&newstype=0102> (NPMO), http://www.yz.ha.cn/zwgk/show_10727.html (Henan), http://jtyst.jiangsu.gov.cn/art/2022/4/28/art_41780_10434280.html (Jiangsu), and http://jtt.shandong.gov.cn/art/2022/4/28/art_14101_10299905.html (Shandong) to the public and potentially affected persons in April 2022 to collect stakeholder comments and suggestions (see Figure 3-1).



Figure 3-1 Disclosure of Draft E&S Documents of the Project

Feedback received have been incorporated into the final E&S documents, which have been disclosed to the public by NPMO and three provincial PMOs on August 24 or 25, 2022 via the websites.

<https://www.jtzyzg.org.cn/LTPU/LEAP/home/html/newsDetail.html?newsid=b3fae97e09014cad9c8c0dcf9c78f309&&newstype=0102> (NPMO),

http://jtt.shandong.gov.cn/art/2022/8/24/art_14101_10303545.html (Shandong),

http://jtyst.jiangsu.gov.cn/art/2022/8/24/art_41780_10585717.html (Jiangsu), and

http://www.yz.ha.cn/zwgk/show_11105.html (Henan) for comments (see Figure 3-2).



Figure 3-2 Disclosure of Final E&S Documents of the Project

Table 3-1 Completed Stakeholder Engagement Activities

Time	Stakeholder	Key topic	Method	Findings and/or suggestions
Jan. – Feb. 2022	MOT, industry experts, provincial transport departments, county transport bureaus, enterprise reps.	Project scope	Online video conference, online key informant interview	<ul style="list-style-type: none"> Discussing the scope of the Project, and learning potential E&S risks
Feb. – Mar. 2022	MOT, industry experts, Henan Provincial Transport Department, Henan Transport Development Center, Hebi and Yongcheng Municipal Transport Bureaus, Xin and Xun County Transport Bureaus, Zhengzhou Institute of Transport, Yongcheng Transport Holding Group, Xun County Huilong Bus Co., Ltd., etc.	Project scope, potential E&S risks, and existing risk management measures in Henan	Online video conference, online key informant interview	<ul style="list-style-type: none"> Learning land uses of the downstream activities of the proposed Type 1 TA activities. No additional LA is involved. Learning local requirements for distributed photovoltaic generation, new energy buses, etc.; Learning current practices of relevant counties for big data security
Feb. – Mar. 2022	MOT, industry experts, Shandong Provincial Transport Department, Jinan Municipal Transport Bureau, Shandong Port Group Co., Ltd., Shandong Shipping Corporation, Shandong Transport Vocational College, etc.	Project scope, potential E&S risks, and existing risk management measures in Shandong	Online video conference, online key informant interview	<ul style="list-style-type: none"> Key E&S risks include potential leakage, fire and explosion risks during energy storage, and green hydrogen production, transport and use; Learning land uses of the downstream activities of the proposed Type 1 TA activities, where hydrogen refueling stations will be constructed within ports, involving no additional LA; Learning the operation of hydrogen fuel cell buses, fares and security measures in the province; Learning the approval process of hydrogen refueling stations, and relevant local technical regulations. The provincial technical guidelines for hydrogen refueling stations were issued in July 2020, and the operating regulations for hydrogen refueling stations in August 2020. For hydrogen safety, the government stresses that enterprises should be responsible primarily for work safety, and all functional departments should be responsible for regulation to ensure that all aspects of the hydrogen energy industry chain are conforming.
Feb. – Mar. 2022	MOT, industry experts, Jiangsu Provincial Transport Department, Jiangsu Yancheng Port Holdings Group Co., Ltd., and other relevant enterprises	Project scope, potential E&S risks, and existing risk management measures in Jiangsu	Online video conference, online key informant interview	<ul style="list-style-type: none"> Key E&S risks include potential leakage, fire and explosion risks during energy storage, and green hydrogen production, transport and use; Learning land uses of the downstream activities of the proposed Type 1 TA activities, where the charging and battery replacement station, hydrogen production and refueling station, and energy storage facility of the Yancheng

Time	Stakeholder	Key topic	Method	Findings and/or suggestions
				<ul style="list-style-type: none"> Port are within the port, involving no additional LA; For hydrogen safety, the government stresses that enterprises should be responsible primarily for work safety, and all functional departments should be responsible for regulation to ensure that all aspects of the hydrogen energy industry chain are conforming.
Oct. 27	E&S experts, provincial transport departments, relevant enterprises	Discussing the scope of the activities, potential E&S risks, and existing risk management measures	Video seminar	<ul style="list-style-type: none"> Further defining the scope of the activities and main E&S risks

4 Stakeholder Engagement Strategy

The Project involves extensive stakeholders. Only if all stakeholders participate actively in the Project through extensive information disclosure can the TA activities, and the proposed technical solutions, standards and policies be implemented successfully.

This strategy is prepared for stakeholder engagement under the activities' different stages. The institutions which will be responsible for engagement activities mainly include the NPMO, PPMOs, and TA contractors;

The participation responsibilities of the stakeholders are defined based on different stages, mainly including:

- Conducting information disclosure, including the research / design scope and reports under the TA activities;
- Consulting with main stakeholders at different stages on suggestions on research / design, relevant E&S risks and impacts, and mitigation measures to collect comments and suggestions;
- Providing a transparent GRM to ensure that stakeholder needs are addressed.

4.1 Resources

The NPMO will recruit an environment specialist and a social specialist to support such activities, which will be funded by the Component 4 of the Project. The PPMOs will designate at least one in-house environment and social focal point to coordinate relevant stakeholder engagement activities and monitor the environment and social performance for relevant TA activities, with the support of NPMO's environment and social specialists. The PPMOs are committed to providing adequate financial resources to engage in-house environment and social staff. TA contractors will appoint focal points to be responsible for the Project's E&S management, and costs so incurred (including external E&S experts and internal focal points) should be included in relevant budgets.

4.2 Responsibilities

The MOT is responsible for loan implementation. The NPMO under the MOT will be responsible for the implementation of the TA activities as the overall project implementation unit, and the routine management of E&S elements. The PPMOs will be responsible for implementing the provincial TA activities, preparing relevant E&S documents, and ensuring the TA contractors implement the activities according to the Bank's E&S management requirements.

In the Project, the activities are implemented through the following 3 stages mainly: **1) preparation stage; 2) research / design stage; and 3) review stage**. During stakeholder engagement, the NPMO and PPMOs will have appropriate responsibilities at different stages.

1) Responsibilities of the NPMO

The NPMO under the MOT will be responsible the routine management of the Project, including liaison with the Bank, coordination of pilots, technical preparation for the national component, output quality control, procurement management, financial management, monitoring and evaluation on E&S and project implementation. An E&S management team will be established at NPMO, consisting of at least one environmental specialist and one social specialist, responsible for the overall E&S management of

the Project. Table 4-1 sets out the NPMO’s responsibilities of stakeholder engagement at different stages of the activities.

Table 4-1 Responsibilities of the NPMO

Stage	Responsibilities
Preparation	<ul style="list-style-type: none"> • Conducting relevant consultation and participation activities on the research scope of the national TA activities, relevant E&S risks and measures, etc.; preparing TORs including stakeholder engagement requirements for the national TA activities, and submitting to the Bank task team for review and clearance; • Reviewing the TORs for the provincial TA activities (including stakeholder engagement requirements), and submitting to the Bank task team for review and clearance; • Reviewing the TA work plan from TA contractors to ensure the workplan contains a SEP and arrangements for E&S analysis and protection of workers’ rights, health, and safety; • Providing technical supports and reviews of E&S audit reports from TA contractors on existing or ongoing facilities, projects or activities, and submitting the audit reports to the Bank tasks team for review and clearance;
Research/ design	<ul style="list-style-type: none"> • Reviewing the stakeholder engagement plan of the Contractors of the national TA activities, and monitoring its implementation; • Overseeing the TA contractors and TA implementation process to ensure compliance with the ESF • Providing technical supports and reviews of the TA outputs to ensure that outputs comply with the TORs, and submitting the TA outputs to the Bank task team for review and clearance.
Review	<ul style="list-style-type: none"> • Disclosing the national research / design outcomes to collect comments from stakeholders

2) Responsibilities of the PPMOs

The PPMOs have been set up at the transport departments of Henan, Jiangsu and Shandong Provinces, responsible for the routine management of the provincial activities. Table 4-2 sets out the PPMOs’ responsibilities of stakeholder engagement the at different stages of the TA activities.

Table 4-2 Responsibilities of the PPMOs

Stage	Responsibilities
Preparation	<ul style="list-style-type: none"> • Conducting relevant consultation and participation activities on the research scope of the provincial TA activities, relevant E&S risks and measures, etc.; preparing TORs including stakeholder engagement requirements for the provincial TA activities, and submitting to the NPMO for review; • For Type 1 TA activities, conducting E&S audits on the existing facilities and candidate manufacturer prior to implementing the TA activities to identify their historical performance and compliance, proposing appropriate measures and actions to mitigate the areas of concern if any, and submitting the audit reports to NPMO for review.
Research/ design	<ul style="list-style-type: none"> • Reviewing the stakeholder engagement plan of the Contractors of the provincial TA activities, and monitoring its implementation
Review	<ul style="list-style-type: none"> • Disclosing the provincial research / design outcomes to collect comments from stakeholders

3) TA Contractors

TA contractors will take primary responsibility for E&S management during TA activities implementation. Table 4-3 sets out the TA contractors’ responsibilities of stakeholder engagement at different stages of the TA activities.

Table 4-3 Responsibilities of TA contractors

Stage	Responsibilities
Preparation	<ul style="list-style-type: none"> Preparing a stakeholder engagement plan (as a part of work plan) complying with the Bank's ESS10 according to the TORs at the early research / design stage of the TA activities, and submitting to the NPMO (national TA activities) or PPMOs (provincial TA activities) for review For Type 1 TA supporting detailed project design, the SEP shall not only include stakeholder engagement during the design process, but also include a plan complying with the Bank's ESS10 on how stakeholders would be engaged during future implementation of the eventual construction.
Research/ design	<ul style="list-style-type: none"> Implementing the stakeholder engagement plan approved by the Bank, and reporting to the NPMO (national TA activities) or PPMOs (provincial TA activities) in the form of semiannual reports
Review	<ul style="list-style-type: none"> Organizing stakeholder engagement activities to learn all stakeholders' attitudes to, and comments and suggestions on research output, revising them accordingly, and giving feedback timely; submitting updated research output to the NPMO (national TA activities) or PPMOs (provincial TA activities)

4.3 Information Disclosure Strategy

4.3.1 Key Points of Information Disclosure for Different Types of Activities

The Project's information disclosure is conducted by the NPMO, and PPMO. See Table 4-4. The NPMO and PPMOs should disclose the scope, nature and duration of the TA activities at the preparation stage, external communication mechanism, GRM and stakeholder engagement plan; at the research stage, they should disclose the Project's potential risks and impacts, and mitigation measures (especially for vulnerable groups) via website or other media to the public; at the review stage, they should disclose the draft design / research output via website for public comments.

Table 4-4 Key Points of Information Disclosure

Stage	Key points
Preparation	Scope, nature and duration of the TA activities; external communication mechanisms and GRMs of the NPMO and PPMOs; stakeholder engagement plan
Research/ design	The Project's potential risks and impacts, and mitigation measures (especially for vulnerable groups)
Review	Draft and final design / research output

4.3.2 Key Methods of Information Disclosure for Different Types of Activities

The NPMO and PPMOs will disclose the above information to project-affected parties and other interested parties in an understandable language at appropriate places for not less than 7 working days. Different information disclosure methods should be used for different types of activities and stakeholders

All disclosed information will be fully recorded. Table 4-5 provides a template.

Table 4-5 Information Disclosure Record Template

Disclosed Information	Venue	Method	Target stakeholders	Comments and feedback received	Agencies responsible

4.4 Stakeholder Engagement Strategy

At different stages of the TA activities, the NPMO, PPMOs and TA contractors will conduct meaningful stakeholder engagement activities respectively. Meaningful engagement is a two-way process that should:

- begin early on during project planning, collect preliminary comments on the Project, and affect the project design;
- encourage stakeholders to give feedback, especially as a way to affect the project design, and involve stakeholders in identifying and mitigating E&S risks and impacts;
- be conducted continuously with the emergence of risks and impacts;
- disclose and disseminate relevant, transparent, objective, meaningful and readily available information in advance in order to conduct meaningful engagement with stakeholders in a culturally appropriate manner, using the local language and in a form understood by them within a timeframe;
- consider and respond to feedback;
- support the extensive participation of all project-affected parties; and
- be free from external manipulation, interference, intimidation and discrimination.

4.4.1 Key Points of Stakeholder Engagement for Activities

1) NPMO and PPMOs

The NPMO and PPMOs will conduct stakeholder engagement activities at the preparation and review stages.

Preparation stage: Before the start of the TA activities, the NPMO and PPMOs will conduct necessary consultation activities with competent authorities, industry associations, research institutes, representative enterprises, residents, etc. to learn their attitudes to and suggestions on the studies under the TA activities, and their needs and concerns, and further define the purpose, scope and tasks of these studies.

In particular, for Type 1 TA activities, the PPMOs will conduct consultations with workers, communities and residents, relevant authorities regarding the existing facilities and candidate manufacturers prior to implementing the TA activities, to learn that if there are outstanding E&S legacy issues or material E&S non-compliance, to learn stakeholders' attitudes to and suggestions on the TA activities, and their needs and concerns, and further define the feasibility studies or technical designs.

Before the start of each TA subproject, the NPMO and PPMOs will identify the main stakeholders with the support of NPMO's E&S specialists, specify stakeholder engagement requirements complying with the Bank's ESS10 in the TORs (see Part 1 of Appendix 1 for details), and submit to the Bank for review and clearance.

Review stage: Cross-provincial, cross-sector participation activities involving primary stakeholders will be organized, including relevant decision-making authorities, local governments, industry associations, research institutes, enterprise and public representatives, news media, etc., to collect comments on research output and give timely feedback.

2) TA contractors

The TA contractors should conduct adequate stakeholder engagement in the whole research stage of the TA activities.

Research stage: At the start of the studies under the TA activities, the TA contractors should make detailed stakeholder engagement arrangements according to the TORs (possibly as part of the work plan), and submit to the Bank for confirmation through the NPMO, as detailed in Part 2 of Appendix 1. Such plan should ensure the timely supply of relevant project information, establish smooth stakeholder engagement channels, and give timely feedback on all stakeholders' needs and concerns. During research, the TA contractors will conduct information disclosure and public participation according to the stakeholder engagement arrangements (to be updated regularly during research), and report implementation to the NPMO and PPMOs regularly. With the progress of the studies under the TA activities, this plan may be further improved, and submitted to the Bank for confirmation.

Table 4-6 provides a template for the public consultation and participation plan.

Table 4-6 Template for the Public Participation and Consultation Plan

No.	Date	Venue	Main activity	Target stakeholder	Method	Agency responsible
1						
2						
3						

Review stage: After the draft research outputs are created, stakeholder engagement activities organized by the PMOs or self-organized will be conducted to collect comments from relevant decision-making authorities, local governments, industry associations, research institutes, industrial parks, enterprise representatives, resident representatives, news media, etc. The draft research outputs will be revised based on the feedback, and feedback given on the comments and suggestions received.

4.4.2 Key Methods of Stakeholder Engagement for Activities

The stakeholder engagement methods include without limitation:

- Key informant interview;
- FGD;
- Door-to-door interview;
- Questionnaire survey and online public consultation;
- Public meeting;
- Seminar and symposium;
- Hearing, etc.

At different stages of the Project, different engagement methods should be applied to different stakeholders, as detailed in Table 4-7. Special methods should be applied to vulnerable groups to prevent them from being excluded. See Section 4.4 for details.

Table 4-7 Modes of Stakeholder Engagement

Stage	Scope	Time	Main stakeholders	Participation mode
Preparation	Discussing the research scope and methods of the	Before the beginning of	Relevant decision-making authorities, local governments,	Seminar, symposium,

Stage	Scope	Time	Main stakeholders	Participation mode
	TA activities, etc.	the studies under the TA activities	industry associations, enterprise reps., urban and rural residents, etc.	questionnaire survey, etc.
Research	All stakeholders give constructive comments on the technical solutions, standards, policies, etc. of the TA activities.	During the studies under the TA activities	Relevant decision-making authorities, local governments, industry associations, representative enterprises, urban and rural residents (including vulnerable groups)	Seminar, symposium, key informant interview, FGD, door-to-door interview, anonymous questionnaire survey, etc.
Review	Collect stakeholder comments on the research output under the TA activities, revise them, and give feedback timely.	Review of the research output under the TA activities	Relevant decision-making authorities, local governments, industry associations, representative enterprises, urban and rural residents (including vulnerable groups)	Seminar, symposium, hearing, FGD, door-to-door interview, anonymous questionnaire survey, online consultation, etc.

All public consultation and participation activities, and their findings and suggestions will be recorded. Table 4-8 provides a record template.

Table 4-8 Public Participation Record Template

Date	Venue	Activity	Method	Participants	Agencies responsible	Findings, suggestions and subsequent actions

4.5 Engagement Strategy for Vulnerable Groups

For vulnerable groups, their features and needs should be considered in information disclosure and engagement activities.

1) Information disclosure strategy

These groups are poorly educated or live in remote areas, and are unfamiliar with intelligent means of living (e.g., rarely using smart phones, Web and other new media). They are likely to be excluded from the design and construction of the TA activities. Therefore, their vulnerabilities in education, information acquisition ability, etc. should be considered in information disclosure activities. An understandable language should be used and the notification method used to ensure that they receive relevant information timely.

2) Engagement strategy

Take appropriate measures to ensure that vulnerable groups express their concerns and suggestions freely during engagement, including:

- Hold an FGD with them separately, or interview them one by one;
- Use the local language during communication, and assign interpreters if necessary;

- Ensure that consultation times and venues are suited to their needs; for example, participation activities for farmers should not be conducted in the busy season, those for workers should not be conducted at workplaces, and those for old people and disabled may be organized by communities and disabled persons' federations;
- Describe reasons for adoption or non-adoption of their views as part of consultation, and give feedback.

If any TA subproject involves any ethnic minority area or is related to ethnic minority residents, information disclosure and stakeholder engagement will be conducted in a culturally appropriate, and gender- and generation-inclusive manner in accordance with the Bank's ESS7 during the studies under the TA activities to ensure that ethnic minority residents are engaged meaningfully, and their comments are incorporated into the research output or project design, so that ethnic minority culture, knowledge and customs are considered in the research output, project design and risk management suggestions, and ethnic minority residents are fully respected and benefit equally in future downstream activities, mainly including:

- Encourage ethnic minority communities to participate in plans and policies involved in the studies, feasibility studies or technical design under the TA activities, or effectively;
- Respect ethnic minority customs and taboos, and appoint staff familiar with local customs and languages for information disclosure and communication;
- Provide sufficient time for decision-making by ethnic minority communities; and
- Provide traffic arrangements to the nearest venue for ethnic minority residents in remote areas.

5 External Communication Mechanisms and GRMs

The NPMO, PPMOs and TA contractors will establish external communication mechanisms and GRMs for the Project.

5.1 External Communication Mechanism

1) NPMO and PPMOs

The NPMO and PPMOs will establish external communication mechanisms to respond to public inquiries and concerns timely.

At the implementation stage, anyone may contact the NPMO and PPMOs based on the contact information on Table 5-1 if he/she has any concern.

Table 5-1 Contact Information for External Communication

Agency	Channel		Time of confirmation
NPMO	E-mail	gef7npmo@jtzyzg.org.cn	Within 2 working days
	Tel	010-65299082	Immediately or within 2 working days (if message)
PPMOs	E-mail	Henan: changzhanban@126.com Shandong: duhtao@shandong.cn Jiangsu: 965372643@qq.com	Within 2 working days
	Tel	Henan: 0371-87165924 Shandong: 16653120256 Jiangsu: 025-52853257	Immediately or within 2 working days (if message)

Note: The contact information will be further updated before project implementation.

2) TA contractors activities

Within one month after the determination of the TA contractors, an external communication mechanism will be established, which will be described in the stakeholder engagement plan for the TA activities.

5.2 GRMs for the Activities

Usually, the Project's GRMs include: 1) the GRM for project workers, and 2) the GRM for relevant communities and the broader public (including ethnic minority residents).

As offices under the PMOs and provincial transport departments, the NPMO and PPMOs have developed and implemented a sound labor management system for direct workers, including a GRM, where all direct workers can use such mechanism easily and solve problems quickly, so there is no need to establish a new GRM for direct workers. The TA contractors are usually research or higher education institutions, which usually have sound labor management measures, a good working environment, a sophisticated labor union and a worker GRM; their workers are well trained to protect themselves. In the E&S section of the TORs for the activities (see the template in Appendix 5 to the ESMF), the NPMO and PPMOs will require the TA contractors to establish and maintain a normally functioning GRM to collect and respond to grievances of researchers (if any).

Under the Project, a GRM will be established to handle grievances from communities and the public (including ethnic minority residents). Any individual or organization having any concern or grievance about the Project may file an appeal through the following steps:

Stage 1: The appellant may file an appeal to the relevant research / design agency of the TA subproject, which should give a reply within 10 working days.

Stage 2: If the appellant is dissatisfied with the reply of Stage 1, it may file an appeal to the PMO, which should give a reply within 10 working days.

Stage 3 (external legal proceedings): If the appellant is still dissatisfied with the reply of Stage 2, it may resort to external legal proceedings.

See Figure 5-1.

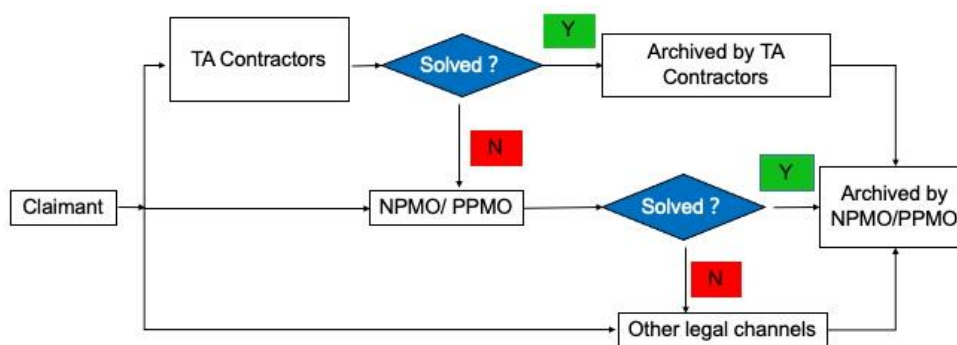


Figure 5-1 GRMs of the Project

The above procedure is not necessarily followed step by step, and the appellant may select any channel directly.

The NPMO, PPMOs and TA contractors will disclose GRMs on their own websites. When receiving an appeal, the E&S officer will record it in appeal records or bulletins, and investigate and handle it. The E&S officer should analyze and sum up such appeal records or bulletins regularly to identify main sources and causes, communicate with researchers timely, and optimize the research scope of the TA activities where reasonable and feasible.

Communities and individuals who believe that they are adversely affected by the Project may submit complaints to existing project-level GRMs or the Bank’s Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the Bank’s independent Inspection Panel. For information on how to submit complaints to the Bank’s corporate Grievance Redress Service (GRS), please visit <http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service>. For information on how to submit complaints to the Bank’s Inspection Panel, please visit www.inspectionpanel.org.

6 Implementation and Monitoring of Stakeholder Engagement

The NPMO will review and supervise the preparation and implementation of the stakeholder engagement plan, and ask the PPMOs and TA contractors to conduct fair, open, just and transparent public participation and consultation to protect the interests of all stakeholders, and promote successful project implementation. The NPMO, PPMOs and TA contractors will arrange staff and budget to conduct information disclosure and public participation activities.

The NPMO, PPMOs, and TA contractors will respectively conduct engagement activities, as described in Section 4. An E&S management team will be established at NPMO, consisting of at least one environmental specialist and one social specialist, responsible for the overall E&S management of the Project, which will be funded by the Component 4 of the Project. The PPMOs will designate at least one in-house environment and social focal point to coordinate relevant stakeholder engagement activities and monitor the environment and social performance for relevant TA activities, with the support of NPMO's environment and social specialists. The PPMOs are committed to providing adequate financial resources to engage in-house environment and social staff.

Relevant stakeholder engagement would be primarily carried out by TA contractors. As shown in Section 4 of the SEF, the TORs for TA activities define appropriate stakeholder engagement requirements. The corresponding work plans will articulate the detailed arrangements and resources (staffing and financial) to conduct stakeholder engagement activities, for which the cost will be covered by the TA contracts.

During project implementation, the NPMO, PPMOs and the TA contractors will keep records of all stakeholder engagement, information disclosure and grievance redress activities. The TA contractors will report to the PMOs quarterly. The PMOs will report the preparation and implementation of the stakeholder engagement plan to the Bank semiannually.

Table 6-1 SEP Monitoring Indicators

No.	Indicator	Unit	Frequency	Key findings and suggestions	Agencies responsible
1.1	Preparation stage				
	Participation activities	/	Quarterly		NPMO, PPMOs, TA contractors
	Number of participants	/	Quarterly		
1.2	Research stage				
	Participation activities	/	Quarterly		NPMO, PPMOs, TA contractors
	Number of participants	/	Quarterly		
	<i>Where: women</i>	/	Quarterly		
	<i>Enterprise workers</i>	/	Quarterly		
	<i>Rural residents</i>	/	Quarterly		
	<i>Urban residents</i>	/	Quarterly		
	<i>Vulnerable groups (low-income residents, old people, the disabled)</i>	/	Quarterly		
	<i>Ethnic minority residents</i>	/	Quarterly		
1.3	Review stage				
	Participation activities	/	Quarterly		NPMO, PPMOs, TA contractors
	Number of participants	/	Quarterly		
	<i>Where: women</i>	/	Quarterly		
	<i>Enterprise workers</i>	/	Quarterly		
	<i>Rural residents</i>	/	Quarterly		
	<i>Urban residents</i>	/	Quarterly		

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No.	Indicator	Unit	Frequency	Key findings and suggestions	Agencies responsible
	<i>Vulnerable groups (low-income residents, old people, the disabled)</i>	/	Quarterly		
	<i>Ethnic minority residents</i>	/	Quarterly		
1.4	Number of grievances and concerns received	/	Quarterly		NPMO, PPMOs, TA contractors
1.5	Number of grievances and concerns handled	/	Quarterly		NPMO, PPMOs, TA contractors

Appendix 1 Stakeholder Engagement Requirements for the Activities

Note: Although the studies under the TA activities will not produce substantial E&S risks, the application and implementation of research output may produce substantial E&S risks. Therefore, at the preparation stage, stakeholder engagement requirements should be defined in the TORs. See Section 1 of this appendix for the key points to be included. Before the start of the studies, the TA contractors will propose detailed and feasible stakeholder engagement arrangements in their work plans. See Section 2 of this appendix for the key points to be included.

1. Key stakeholder engagement requirements in the TORs

- Stakeholder Identification;
- SEP: information disclosure, public participation, etc.
- GRM;
- Management responsibilities;
- Funding (budget) and implementation arrangements for stakeholder engagement activities

2. Key stakeholder engagement arrangements in the work plan

- Details of the studies under the TA activities;
- Detailed stakeholder identification and analysis: with focus on identifying negatively affected stakeholder (especially vulnerable groups), and decision-making authorities related to the studies under the TA activities, and analyzing their influence on the Project and impacts by the Project;
- SEP, including scope, subjects, time, venue, mode, etc.;
- Participation plan for vulnerable groups, including scope, time, venue, mode, etc.;
- Responsibilities of agencies concerned, such as the NPMO, PPMOs and TA contractors;
- Funding, responsibilities and resources for stakeholder engagement;
- Detailed arrangements of the external communication mechanisms and GRMs;
- Stakeholder engagement procedure and emergency response in consideration of COVID-19 and other infectious diseases; and
- Staff, estimated budget and resource for implementing stakeholder engagement activities.