SFG4122

GEF Trust Fund Financed

China Project for the Establishment of an Institutional System for Green and Efficient Freight Transport Development

Environmental and Social Management Framework

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1. Project Background

Climate change is the most serious and urgent challenge facing humanity today. Since the beginning of the 21st century, in order to build a community of shared future for mankind, the Chinese government has made and is making great efforts to tackle climate change and promote green and low-carbon development. It pushes ahead with regional and international cooperation on reaching an agreement at the Conference of the Parties to the *United Nations Framework Convention on Climate Change* in Paris (the *Paris Agreement*) and on tackling climate change. Furthermore, guided by its policies, the Chinese government has created a favorable environment for promoting green and low-carbon development and ecological conservation. It has not only improved the top-level planning and institutional system for green development, but it has also included green development in new development strategies. In this context, the Chinese government has developed and issued a number of key policies, such as *Work Plan for Controlling Greenhouse Gas Emissions During the 12th Five-Year Plan Period*, *National Plan on Climate Change (2014-2020)*, and *National Strategy for Climate Adaption*. With regard to economic and social activities, the Chinese government has adopted strong policies and measures to accelerate growth model transformation and economic structure adjustment, so as to effectively control greenhouse gas emissions. According to a report of the National Development and Reform Commission, China's carbon dioxide (CO_2) emissions per unit of GDP dropped by 20% during the 12th Five-Year Plan period, which exceeds the target of a 17% decrease. It is estimated that CO_2 emissions per unit of GDP will drop by 40% to 45% from 2005 to 2020.

The transport sector is one of the key sectors on which the Chinese government focuses when tackling climate change and striving to achieve green development. Transport accounts for 8.2% of total energy consumption, 35.3% of total oil consumption, and 12% to 15% of CO_2 emissions in China. Freight transport is a major contributor of greenhouse gas and air pollutant emissions in the transport sector. In recent years, guided by the central government of China, the Ministry of Transport has developed and issued a number of documents and taken a number of measures to facilitate energy conservation and emissions reduction with a view to achieving green transport. These measures include conducting statistical monitoring of energy consumption among key enterprises, launching pilot projects for natural gas powered vehicles and ships, implementing fuel consumption limits, disclosing the vehicle models that meet the fuel consumption standards, and recommending vehicle models for drop-and-pull transport. Compared with 2005, the CO_2 emissions per revenue tonne-kilometers (RTK) by commercial vehicles and commercial vessels dropped by 15.9% and 20% respectively in 2015; the oil consumption and CO_2 emissions per tonne-kilometer by civil aviation transport dropped 13.5% and 13.5% respectively.

Despite the efforts of the government, China's freight transport system is still plagued by the following problems: unreasonable transport structure, energy overconsumption, and the large quantity of pollutant emissions.

With regard to major freight corridors, most of the freight in China is moved by road transport, which consumes more energy and emits more pollutants than other modes of transportation. The nitrogen oxides and particles emitted by freight vehicles account for 68% and 79% respectively of the total nitrogen oxides and particles emitted by all vehicles. The nitrogen oxides and particles emitted by freight vehicles exceed those emitted by trains and ships (railway and waterway are considered relatively green transportation modes). In 2015, road freight volume accounted for 76% of the total freight volume, while railway freight volume and waterway freight volume accounted for 7.6% and 13.8% respectively of the total freight volume. More freight is moved by road transport than by railway and waterway transport in China, which is different from that in developed countries.

With regard to distribution, cities in China are facing ever increasingly serious problems of traffic congestion and air pollution. Emissions produced by urban freight transport are becoming one of the major causes of urban air pollution. According to the *Green Book of Climate Chang: Annual Report on Actions to Address Climate Change (2013)*, CO_2 emissions in cities account for 90% of total CO_2 emissions nationwide; SO_2 emissions in cities account for 98% of total SO_2 emissions nationwide; the energy consumed by urban freight transport accounts for 30% to 40% of the total energy consumed by urban transport. In China, freight vehicles account for only about 10% of the total motor vehicles, but the NOx and PM emissions produced by freight vehicles account for 68% and 79% respectively of the NOx and PM emissions produced by all motor vehicles. This has become a key area on which smog control in major Chinese cities focus in recent years.

The energy consumption statistics and monitoring system of the transport sector remain to be improved. In particular, the energy consumption and carbon emissions monitoring capacity of the freight transport sector should be improved. There is a lack of basis for transport management departments to assess the transport sector's ability to conserve energy and reduce emissions. Moreover, the transport management departments have not provided sufficient support for improving the management and decision making of the transport sector.

In order to overcome the aforesaid problems and explore ways to develop freight transport in an intensive, efficient and green manner, China's Ministry of Transport proposed to the trust fund of Global Environment Facility (GEF) the project for the “Establishment of an Institutional System for Green and Efficient Freight Transport Development” (“the project” for short). The objective of the project is to research and explore multimodal transport, urban green freight transport, and freight transport environment management systems through technical assistance research projects and pilot investment projects. Moreover, top-level planning for seamless intermodal transport, efficient and green urban freight transport, and freight transport environment management will be carried out. In addition, pilot projects will be launched in highly interrelated areas in

Guangdong, Liaoning, Shandong, Fujian and Hubei provinces, in order to accumulate relevant experience. All these measures are designed to solve salient problems such as poor transport structure, the high cost of integrated logistics, and large energy consumption, so as to drive forward the establishment of an efficient and green freight transport system, facilitate the structural emission reduction of the freight transport sector, and reduce energy consumption and emissions while increasing freight transport and its efficiency. This project supports China's 2030 national strategic goals to lower carbon emissions and improve environmental quality.

2. Project Contents

In this project, top-level planning for seamless intermodal transport, efficient and green urban freight transport, and freight transport environment management will be carried out. In addition, pilot projects will be launched in highly interrelated areas, in order to accumulate relevant experience. All these measures are designed to solve salient problems such as poor transport structure, the high cost of integrated logistics, and large energy consumption, so as to drive forward the establishment of an efficient and green freight transport system, facilitate the structural emission reduction of the freight transport sector, and reduce energy consumption and emissions while increasing freight transport and its efficiency. This project supports China's 2030 national strategic goals to lower carbon emissions and improve environmental quality. The project includes 11 components, of which 6 are technical assistance (TA) projects at national level and 5 pilot TA activities at provincial and local level. These components involve major freight corridors, urban freight transport, and freight transport environment management. See table I for the general information about the project.

Table I: Overview of the proposed project components

No.	Project contents	Aid types	Undertaking units
1	Study on medium-long term plan for promoting multimodal transport in China	Technical assistance	Ministry of Transport
2	Study on regulations and standardization of multimodal transport in China	Technical assistance	Ministry of Transport
3	Action Plan for Efficient and Green Freight Corridor Improvement in China	Technical assistance	Ministry of Transport
4	High efficiency freight transport organization and management plan for freight corridors in China	Technical assistance	Ministry of Transport
5	Guideline of Intermodal Freight for Yangtze River Economic Belt (YREB) Considering Ecological Civilization	Technical assistance	Ministry of Transport
6	Guideline for Green and Efficient Urban Freight Transport and Distribution	Technical assistance	Ministry of Transport
7	Yantai Bohai Bay Road-Waterway Intermodal Transport Demonstration Project	Technical assistance	Shandong Provincial Department of

			Transport
8	Weifang Green Urban Freight Distribution Demonstration Project	Technical assistance	Shandong Provincial Department of Transport
9	Xiamen Sea-Rail Intermodal Transport Demonstration Project	Technical assistance	Fujian Provincial Department of Transport
10	Guangdong Urban-Rural Integrated Distribution Pilot	Technical assistance	Guangdong Provincial Department of Transport
11	Improvement of the Integrated Development of Han-River Inland Waterway and Green Navigation Channel Pilot	Technical assistance	Hubei Provincial Department of Transport

3. Purposes and Bases for Preparation of the Framework

The main purpose of preparing this Environmental and Social Management Framework (ESMF) is to ensure that the negative impact of the project implementation to the environment and society is minimized. To this end, effective measures will be developed and delivered in accordance with the World Bank's environmental and social safeguard policies and China's relevant policies and regulations.

The ESMF provides the procedures, standards and requirements for the implementation of the project activities in terms of environmental and social safeguards consideration. Being a part of the legal agreement for the project, the ESMF covers the objectives of the project, procedures, institutional arrangement, and implementation plans, along with the identification and management of the potential environmental and social impacts of the project. In addition, the ESMF also involves public engagement, grievance mechanism, and the recommended screening tools for all project components.

The ESMF is prepared primarily based on the Proposal for the Project for the Establishment of an Institutional System for Green and Efficient Freight Transport Development, feasibility study reports on the project components, China's relevant laws and regulations, and the World Bank's safeguard policies.

At the preparation stage, the PMO conducted a screening of the Bank’s Safeguard Policies that may apply to this project. The finding is that, the project activities are all technical assistance activities (studies, information system development, workshops etc.) that don’t involve infrastructure or civil works， no land acquisition and resettlement impacts. The main environmental and social concerns are the potential downstream implications of the studies and action plan prepared under the project, which warrant thorough consideration during the development of such reports. Given a national coverage project, the Bank policy OP4.10 may be triggered. In addition, some activities, such as action plan for corridor improvement, may pose potential downstream

environmental and social impacts, in case specific infrastructure project is recommended, physical civil works may be involved", therefore the Bank policy OP4.12 ,OP4.01 and OP4.04 are triggered.

A general assessment of the potential environmental and social impacts is concluded as follows:

1) None of the six national-level technical assistance research components of this project or the technical assistance programs of the local demonstration components of this project involves the construction items that will impact the environment and society. Therefore, these projects will not directly impact the environment and society.

2) The five local demonstration components of this project focus on data mining analysis for the platforms of green freight distribution and intermodal transport, as well as the establishment of a management system and technical standards for the platforms. None of these components involve, or there are sufficient reasons to believe that currently none of these components involve civil construction items. Therefore, these components will have no direct impact the environment or society.

3) Both national and local level studies and plan development activities may have indirect downstream environmental and social implications if the results or recommendations of such studies are put into implementation in the future. These downstream concerns will be incorporated into the study and plan development.

4) Other activities include IT system development, data analysis, capacity training, publicity and promotion workshops. These activities have no environmental and social impacts envisaged.

5) The component in Hubei province, i.e. study of policies and guidelines for better managing the inland waterway operation in Han River in Hubei Province, is supporting the an ongoing World Bank lending project, namely Yakou inland waterway project, in the province. Environmental and social safeguard issues related to the Yakou project have been addressed in accordance with the Bank safeguard policies under that project.

Based on the above reasons, the ESMF is prepared during the project preparation. It outlines the measures to mitigate, reduce, and mitigate the social risks and impacts of the project. Once the social risks and impacts of the project are identified, measures to tackle the risks and impacts and relevant organizational arrangements should be put in place in accordance with the ESMF and the report on the work thereof should be submitted to the World Bank.

4. Identification and Screening of the Environmental and Social Risks and Impacts

During the project preparation, the Project Management Office (PMO) has conducted the preliminary identification and screening of the potential environmental and social risks and impacts of the project, based on the construction items of the project components. See table II for the details.

Table II: Screening of environmental and social impacts

No.	Undertaking units	Project contents	Nature of activities	Environmental impacts	Social impacts
1	Ministry of Transport	Study on medium-long term plan for promoting multimodal transport in China	General study	Positive environmental benefits; no physical civil works involved; potential downstream environmental implications	No physical civil works involved; Potential downstream social impacts, such as impacts on small freight logistics companies/individuals.
2	Ministry of Transport	Study on regulations and standardization of multimodal transport in China	General study	Positive environmental benefits; no physical civil works involved; potential downstream environmental implications	No physical civil works involved; Potential downstream social impacts, such as impacts on small freight logistics companies/individuals.
3	Ministry of Transport	Action Plan for Efficient and Green Freight Corridor Improvement in China	Action plan development	Positive environmental benefits; no physical civil works involved; potential downstream environmental implications. The plan may include recommendations for specific infrastructure projects	Potential downstream social impacts, in case specific infrastructure project is recommended, physical civil works may be involved.
4	Ministry of Transport	High efficiency freight transport organization and management plan for freight corridors in China	General study	Positive environmental benefits; no physical civil works involved; potential downstream environmental implications	No physical civil works involved; Potential downstream social impacts, in particular, the impacts on small freight logistics companies/vulnerable groups.
5	Ministry of Transport	Guideline of Intermodal Freight for Yangtze River Economic Belt (YREB) Considering Ecological Civilization	Guidelines development	Positive environmental benefits; no physical civil works involved; potential downstream environmental implications	No physical civil works involved; Potential downstream social impacts, in particular, the impacts on small freight logistics companies/vulnerable groups.
6	Ministry of Transport	Guideline for Green and Efficient Urban Freight Transport and Distribution	Guidelines development	Positive environmental benefits; no physical civil works involved; potential downstream environmental implications	No physical civil works involved; Potential downstream social impacts, in particular, the impacts on small freight logistics companies/vulnerable groups.
7	Shandong Provincial Department of Transport	Big Data Analysis for Multimodal Transport	Big data analysis	No physical civil works involved; no environmental implications	No physical civil works involved; Collect sex-disaggregated , vulnerable groups/ labors baseline data on the intended beneficiaries of the project;
		Dissemination workshops	Workshops	No physical civil works involved; no environmental implications	Vulnerable groups / small companies, women labors involvement.
8	Shandong	Green Urban/Rural	Data	No physical civil works	No physical civil works

	Provincial Department of Transport	Freight Distribution Modal Study	collection; Data analysis; Training and workshops	involved; no environmental implications	involved; Collect sex-disaggregated , vulnerable groups/ labors baseline data on the intended beneficiaries of the project;
9	Fujian Provincial Department of Transport	E-commerce Platform Development	Software development and IT hardware procurement and installation	No physical civil works involved; no environmental implications	No physical civil works involved; Platform may consider public engagement and Grievance Redress Mechanism (GRM)
		Study on the Optimization of Freight Distribution Organization at Xiamen Port	General study	Positive environmental benefits; no physical civil works involved; potential downstream environmental implications	No physical civil works involved; Potential downstream social implications
10	Guangdong Provincial Department of Transport	Guang-qing Urban-Rural Integrated Distribution Pilot, including development of distribution organization plan; development of the common software module; and monitoring and evaluation.	General study	Positive environmental benefits; no physical civil works involved; potential downstream environmental implications	No physical civil works involved; Potential downstream social implications
		Capacity building	Training and workshops	No physical civil works involved; no environmental implications	Vulnerable groups, small freight companies, and female employment involved
11	Hubei Provincial Department of Transport	Study on the strategic plan for improving the integrated development of Han-River inland waterway	General study	Positive environmental benefits; no physical civil works involved; potential downstream environmental implications	No physical civil works involved; Potential downstream social implications
		Green waterway development; conventional navigation lights replaced with solar-powered integrated navigation lights	Equipment replacement	Positive environmental implications; no physical civil works involved.	No physical civil works involved; Potential downstream social implications

5. Management of Environmental and Social Risks and Impacts

Based on the screening and analysis of the potential environmental and social risks and impacts of the project components, the PMO has proposed Environmental and Social Management Framework. Based on the contents of the project components, different measures will be taken during the project preparation and implementation to manage environmental and social risks and impacts. See table III for the details.

Table III: Environmental and social impact management plan

No.	Project contents	Environmental impacts	Environmental management measures	Social impacts	Social management measures	Responsible organizations	Research results
1	Study on medium-long term plan for promoting multimodal transport in China	Positive environmental benefits; no physical civil works involved; potential downstream environmental implications	In the TOR that proposes the research plan, the PMO clearly requires that in the research report there should be a section/sections analyzing the potential downstream implications of intermodal transport and providing the measures to eliminate these impacts.	No physical civil works involved; Potential downstream social impacts, such as impacts on small freight logistics companies/individuals.	In the TOR that proposes the research plan, the PMO clearly requires that in the research report there should be a section/sections analyzing the potential downstream implications of intermodal transport (especially the potential impacts of intermodal transport to small freight companies and individuals) and providing the measures to eliminate these impacts.	Research unit	The corresponding section(s) of the research report
2	Study on regulations and standardization of multimodal transport in China	Positive environmental benefits; no physical civil works involved; potential downstream environmental implications	In the TOR that proposes the research plan, the PMO clearly requires that in the research report there should be a section/sections analyzing the potential downstream implications of intermodal transport standards and rules and providing the measures to eliminate these impacts.	No physical civil works involved; Potential downstream social impacts, such as impacts on small freight logistics companies/individuals.	In the TOR that proposes the research plan, the PMO clearly requires that in the research report there should be a section/sections analyzing the potential downstream implications of intermodal transport standards and rules (especially the potential impacts of intermodal transport standards and rules to small freight companies and individuals) and providing the measures to eliminate these impacts.	Research unit	The corresponding section(s) of the research report

3	Action Plan for Efficient and Green Freight Corridor Improvement in China	No physical civil works directly involved; research results may cause other interested parties to carry out infrastructure construction, which may have downstream environmental implications.	In the TOR that proposes the research plan, the PMO clearly requires that in the research report there should be a section/sections analyzing the potential impacts of the action plan and providing the measures to eliminate these impacts.	Potential downstream social impacts, in case specific infrastructure project is recommended, physical civil works may be involved.	In the TOR that proposes the research plan, the PMO clearly requires that in the research report there should be a section/sections analyzing the potential impacts of the action plan and providing the measures to eliminate these impacts.	Research unit	The corresponding section(s) of the research report
			If the research report provides the detailed infrastructure construction project proposals, a EIA TOR should be prepared for the downstream project preparation based on the impacts identified.		If the research report provides the detailed infrastructure construction project proposals, TORs for Resettlement Action Plan (RAP) and Social Assessment (SA) should be prepared for the downstream project preparation based on the impacts identified.	The project component management office	Independent report
4	High efficiency freight transport organization and management plan for freight corridors in China	Positive environmental benefits; no physical civil works involved; potential downstream environmental implications	In the TOR that proposes the research plan, the PMO clearly requires that in the research report there should be a section/sections analyzing the potential impacts of the plan and providing the measures to eliminate these impacts.	No physical civil works involved. Potential downstream social impacts, in particular, the impacts on small freight logistics companies/vulnerable groups.	In the TOR that proposes the research plan, the PMO clearly requires that in the research report there should be a section/sections analyzing the potential impacts of the plan, assessing the impacts of the plan to small companies and vulnerable groups, and providing the measures to eliminate these impacts.	Research unit	The corresponding section(s) of the research report

5	Guideline of Intermodal Freight for Yangtze River Economic Belt (YREB) Considering Ecological Civilization	Positive environmental benefits; no physical civil works involved; potential downstream environmental implications	In the TOR that proposes the research plan, the PMO clearly requires that in the research report there should be a section/sections analyzing the potential downstream impacts of intermodal transport along the Yangtze River Economic Belt and providing the measures to eliminate these impacts.	No physical civil works involved. Potential downstream social impacts, in particular, the impacts on small freight logistics companies/vulnerable groups.	In the TOR that proposes the research plan, the PMO clearly requires that in the research report there should be a section/sections analyzing the potential downstream impacts of intermodal transport along the Yangtze River Economic Belt, assessing the impacts of intermodal transport along the Yangtze River Economic Belt to small freight companies and vulnerable groups, and providing the measures to eliminate these impacts.	Research unit	The corresponding section(s) of the research report
6	Guideline for Green and Efficient Urban Freight Transport and Distribution	Positive environmental benefits; no physical civil works involved; potential downstream environmental implications	In the TOR that proposes the research plan, the PMO clearly requires that in the research report there should be a section/sections analyzing the potential downstream impacts of green freight transport and distribution and providing the measures to eliminate these impacts.	No physical civil works involved. Potential downstream social impacts, in particular, the impacts on small freight logistics companies/vulnerable groups.	In the TOR that proposes the research plan, the PMO clearly requires that in the research report there should be a section/sections analyzing the potential downstream impacts of green freight transport and distribution, assessing the impacts of green freight transport and distribution to small freight companies and vulnerable groups, and providing the measures to eliminate these impacts.	Research unit	The corresponding section(s) of the research report
7	Big Data Analysis for Multimodal Transport	No physical civil works involved; no environmental implications	No environmental risks or impacts identified	No physical civil works involved. Collect sex-disaggregated , vulnerable groups/ labors baseline data on the intended beneficiaries of the project;	When commissioning the data analysis task to a researcher, the project component management office requires that the researcher should analyze the impacts of multimodal transport to laborers, vulnerable groups, and gender distribution based on the basic information about the intended beneficiaries of the project, and provide advice on mitigating the potential impacts.	Implementation unit	Social impact analysis report

	Dissemination workshops	No physical civil works involved; no environmental implications	No environmental risks or impacts identified	Vulnerable groups / small freight companies, women labors involvement.	The affected vulnerable groups, small companies, and female workers will be included in the target group(s) for dissemination and training	The project component management office	
8	Green Urban/Rural Freight Distribution Modal Study	No physical civil works involved; no environmental implications	No environmental risks or impacts identified	No physical civil works involved. Collect sex-disaggregated , vulnerable groups/ labors baseline data on the intended beneficiaries of the project;	The impacts of multimodal distribution to laborers, vulnerable groups, and gender distribution should be analyzed based on the basic information about the intended beneficiaries of the project, and advice on mitigating the potential impacts should be provided.	The project component management office	Social impact analysis report
9	E-commerce Platform Development	No physical civil works involved; no environmental implications	No environmental risks or impacts identified	No physical civil works involved. Platform may consider public engagement and Grievance Redress Mechanism (GRM)	Public consultation and grievance redress mechanisms will be established in the platform development; Public consultation results will be incorporated into the platform development.	The project component management office	The e-commerce platform into which public consultation/opinions are integrated
	Study on the Optimization of Freight Distribution Organization at Xiamen Port	Positive environmental benefits; no physical civil works involved; potential downstream environmental implications	In the TOR that proposes the research plan, the PMO clearly requires that in the research report there should be a section/sections analyzing the potential downstream impacts of the optimization of freight distribution organization at Xiamen Port and providing the measures to eliminate these impacts.	No physical civil works involved; Potential downstream social implications	In the TOR that proposes the research plan, the PMO clearly requires that in the research report there should be a section/sections analyzing the potential downstream impacts of the optimization of freight distribution organization at Xiamen Port and providing the measures to eliminate these impacts.	Research unit	The corresponding section(s) of the research report

10	Guang-qing Urban-Rural Integrated Distribution Pilot, including development of distribution organization plan; development of the common software module; and monitoring and evaluation.	Positive environmental benefits; no physical civil works involved; potential downstream environmental implications	In the TOR that proposes the research plan, the PMO clearly requires that in the research report there should be a section/sections analyzing the potential downstream impacts of the integrated distribution and providing the measures to eliminate these impacts.	No physical civil works involved; Potential downstream social implications	In the TOR that proposes the research plan, the PMO clearly requires that in the research report there should be a section/sections analyzing the potential downstream impacts of the integrated distribution and providing the measures to eliminate these impacts.	Research unit	The corresponding section(s) of the research report
	Capacity building	No physical civil works involved; no environmental implications	No environmental risks or impacts identified	Vulnerable groups, small freight companies, and female employment involved	The affected vulnerable groups, small companies, and female workers will be included in the target group(s) for training	The project component management office	
11	Study on the strategic plan for improving the integrated development of Han-River inland waterway	Positive environmental benefits; no physical civil works involved; potential downstream environmental implications	In the TOR that proposes the research plan, the project component management office clearly requires that researchers should analyze the potential downstream impacts of the integrated development of Han-River inland waterway and provide the measures to eliminate these impacts in the research report.	No physical civil works involved; Potential downstream social implications	In the TOR that proposes the research plan, the project component management office clearly requires that researchers should analyze the potential downstream impacts of the integrated development of Han-River inland waterway and provide the measures to eliminate these impacts in the research report.	Research unit	The corresponding section(s) of the research report
	Green waterway development; conventional navigation lights replaced with new solar navigation lights	Positive environmental implications; no substantial civil works involved	No environmental risks or impacts identified	No physical civil works involved;	No social risks or impacts identified		

6. Management Procedure and Organizations

The PMO will identify and manage environmental and social risks and impacts based on the project's own environmental and social risks and impacts as well as the World Bank's project preparation and management

procedures. The basic management procedure is:

1. Environmentalist and sociologists will be appointed to the project management team. The PMO will appoint at least one environmentalist and one sociologist to the project management team. The environmentalists and sociologists to be appointed must have at least 10 years of relevant work experience. In particular, they should be familiar with the World Bank's environmental and social safeguard policies and have led the environmental and social risk management work for similar projects.

2. According to the World Bank's safeguard policies and the opinions of the relevant expert panel of the World Bank, the PMO is responsible for preparing a Terms of Reference (TOR) for the national-level research projects and local-level components of the project. The TOR will list the requirements on the identification of the potential environmental and social risks and impacts during the study and implementation of the project components, the risk management measures, the risk management procedure, and public consultation.

3. In accordance with the TORs, , special organizations or personnel will be arranged by the project component management offices to identify and manage the environmental and social risks and impacts of the project and its components during the study and implementation of the project and its components. The research results of the project will include the environmental and social risks and impacts management contents.

4. During the implementation of the project, the World Bank will inspect and supervise the environmental and social risks and impacts of all components of the project. The environmental and social risk management organizations or personnel of the components are responsible for reporting the relevant work and research results to the World Bank and improving the relevant work in accordance with the World Bank's requirements.

5. At the end of the project, the PMO will evaluate and inspect the environmental and social risk management for different components based on their research results..

Thus, the organizations involved in the environmental and social risk management for the project are as follows:

(1) Project Management Office. Its primary responsibilities include defining the components of the project; recruiting environmentalists and sociologists to form an environmental and social impact management team; proposing TORs for the management of the environmental and social impacts of the project components; organizing and supervising the implementation of environmental and social risk management for the components; and inspecting and evaluating the implementation of environmental and social risk management.

(2) Project Component Management Offices. They are responsible for establishing special organizations or arranging special personnel to identify and manage the environmental and social risks and impacts involved in the project. If they commission a third party to carry out the research and development work, they should truthfully convey the tasks and requirements of the TORs proposed by the PMO to the third party and supervise the research and development work carried out by the third party. Every component management office is responsible for inspecting and evaluating the management of the social and environmental risks and impacts

of the component concerned.

(3)Project Implementation Units (PIUs). They are responsible for including the identification and management of environmental and social risks and impacts in the relevant research and developing feasible measures and plans to eliminate environmental and social impacts based on their respective TORs and the characteristics of their respective components.

7. Information Disclosure, Public Consultation and Grievance Redress

During preparation if the ESMF, information disclosure and public consultation was carried out through meetings with agencies and other stakeholders at central and local levels. Opinions are incorporated into the project design and the ESMF. The full ESMF was disclosed on the following dates and locations:

- Central level:

February 22, 2018: http://www.transformcn.com/Topics/2018-02/22/content_139827.htm

- Local level: February 27, 2018

Guangdong: http://219.135.151.98:8099/logisticsWeb/wlzx/14157.jhtml

Hubei: http://www.hjyksn.cn/wz/web/xxgk_show.jsp?agent=10BZbFJXtQX5V2NICAGS1f/HpBJ6X/xF26eU/NEUVGno=&view_lbunid=750513123B3513545AAC0A8464591D90&unid=7602010B373734EC2B2C0A846413D390

Fujian: http://www.xmcp.gov.cn/tzxx/hyxw/201802/t20180227_1851194.htm

Yantai: http://jtj.yantai.gov.cn/art/2018/2/27/art_310_885197.html

Weifang: http://www.wfjt.gov.cn/gzdt1/4024.jhtml

During the research and implementation of the project components, public consultation should be carried out in order to establish an effective grievance redress mechanism.

Public consultation and the establishment of a grievance redress mechanism shall be explicitly listed in the TOR prepared by the PMO, which will underpin the research and implementation of the project and its components.

In the research and implementation of the project components, information about the grievances and complaints of all stakeholders will be collected; and the relevant processes and results will be recorded in detail.

Public opinions and advice should be taken into consideration when the relevant research is conducted, so that the research results can reflect the results of public consultation. Public consultation and the establishment and operation of the grievance redress mechanism will serve as one of the indicators for evaluating the project outcomes.

8. Capacity Building

Capacity building is crucial to the successful implementation of the aforesaid activities. With regard to the

current institutional arrangements, the PMO under the Ministry of Transport and the project component management offices should strengthen their capacity building, so as to better fulfill their responsibilities. The cost of capacity building can be covered by the project loan funds or by the supporting funds that are provided by the Chinese side.

Capacity building in environmental and social safeguard will include two aspects. First, the PMO will determine staffing requirements at different levels and additional staffing requirements. Second, the PMO will train people engaged in environmental and social safeguard for this project.

Training programs for people engaged in environmental and social safeguard

	Time frame	People involved	Contents
	Early stage of the project	Relevant staff of the project component management offices	Trainings to enhance the knowledge of the staff for the fundamental policies, rules, philosophies, and measures regarding the environmental and social safeguard management for the World Bank financed projects.
	Early stage of the project	Relevant staff of the project component management offices	Discussion about the fundamental policies and rules of the environmental and social safeguard for the World Bank financed projects.
	Middle stage of the project	Relevant staff of the project component management offices Persons in charge of the project undertaking units	Environmental and social safeguard management practice trainings for the World Bank financed projects; and relevant document management requirements
	Late stage of the project	Relevant staff of the project component management offices Persons in charge of the project undertaking units	The implementation, guidance, supervision, test, and evaluation of the environmental and social safeguard documents for the World Bank financed projects