SFG2622 V2 REV

GEF CHINA SUSTAINABLE CITIESINTEGRATED APPROACH PILOT

Environmental Management Framework

(For Appraisal)

November 2016

Table of Contents

1. Preface

1.1 Background and Purpose

At present, the urbanization ratio in China has reached 56.1%. Along with rapid urbanization and spatial expansion, cities in China are negatively impacted by a lack of human orientated design, traffic congestion, air pollution and longer commute times. By 2012, GHG emission per capita reached 6.26 ton. During 21st UN Climate Summit in December 2015, China announced its goal to peak GHC emission around 2030 or earlier time and cut CO_2 emission per GDP by 60% -65% compared to that of 2005 in its INDC. In order to achieve these goals, China needs to undergo changes in the way cities are development.

Considering the important role cities play in tackling climate change, GEF Council approved the 6th round of funding (July 2014-June 2018), namely, the Sustainable Cities Integrated Approach Program under GEF-6. Chinese government, as one of the participating countries of the global program, proposed a program including seven participating cities of Beijing, Tianjin, Shijiazhuang, Ningbo, Nanchang, Shenzhen and Guiyang as pilot cities and the Ministry of Housing Urban Rural Development. The China Sustainable Cities Integrated Approach Pilot, implemented by the WB, is an innovative project under GEF-6, which aims to take management measures to mitigate environmental issues faced during urbanization and further to support global environmental governance.

China's new urbanization is in a critical phase and low-carbon, ecological friendly and sustainable development have been models for city transformation and development. Transit Oriented Development (TOD) is a strategy that aims use land intensively along transit, maintaining a friendly ecological environment. It can be a reference model by providing and demonstrating an integrated approach to transport and land use, through which, the overall efficiency of cities is to be improved, the spatial expansion of cities can be managed to promote greener growth and inclusive development.

TOD utilizes mass rapid public transport to guide the development of cities where economic growth centers, efficient layout and friendly environments are formed through efficient land utilization and mixed development of land around the public transport stations or transit hubs. Furthermore, a new spatial structure and formation of cities is to be supported, one which is land intensive and ensures efficient expansion, as well as ensuring environmentally-friends developments.

In line with the requirements of WB safeguards policies, there is a need to identify and evaluate the potential project environmental and social impacts, risks and their contents for wholly or partially WB financed activities. Firstly, there is a need to identify the nature of impacts or risks, identify the environmental category (there are A,B,C, FI, totaling four categories under WB's environmental assessment). Secondly, the proper safeguard measures are taken to avoid or mitigate adverse impacts. According to the assessment on the potential environmental impact scope and extent due to the proposed project activities, the project is identified as category B.

The activities under the Project to be financed by GEF grant cover consulting services such as technical assistance, capacity building and project management rather than civil works. The Environmental Management Framework (EMF) is prepared to guide PMOs at different levels to implement efficient environmental management. The EMF is prepared based on the proposed project activities in different pilot cities and environmental impact assessments for different categories. EMF puts forward the environmental management procedures, information disclosure and public consultation during implementation to ensure that both China's regulations and laws and WB's environmental policies be met during project implementation.

1.2 Laws and regulations applied

1.2.1 WB's safeguard policy

WB's safeguard policies triggered by the project include *OP 4.01 Environmental Assessment*, *OP4.11 Cultural Relics, policy on Information Disclosure* and *OP 4.12 Involuntary Resettlement*. The details of *Involuntary Resettlement* can be found in the *Social Management Framework.*

OP4.01 Environmental Assessment is to be fully applied to the Project during implementation. The project activities to be financed by the grant, environmental impact analysis scope and related requirements, information disclosure and public consultation and the requirements, preparation and implementation of environmental, social management and plans should meet the requirements of *OP4.01*.

1.2.2 National laws, regulations and policies

The framework of laws, regulations and policies applied to the project includes five parts covering related national laws, regulations, departmental regulations and standard documents, technical guidelines and standards. Of which, the Law of Environmental Protection is the basis of environmental protection. The specific laws targeting prevention and treatment of water, air and solid waste such as *Prevention of Water Pollution (June 2008), Prevention of Air Pollution (January 2016), Environmental Prevention of Solid Waste Pollution (June 2013), Prevention of Noise Pollution (March 1997) and Protection of Cultural Relics (December 2007)* are applied to the Project.

This chapter focuses on the description of some newly issued laws or regulations related closely to the project, which include newly revised *Law of Environmental Protection* (Jan 2015), newly issued *Methodologies of Environmental Impact Assessment, Regulations of Planning Environmental Impact Assessment* (August 2009) and Ministry of Environment (MOE) issued 13th Five-Year Plan documents including Implementation Program on *Environmental Impact Assessment Reform Guideline* of Planning Environmental Impact Assessment and Guideline of Environmental Impact Assessment of Urban Rail Transit.

Table 1-1 Project Applied Laws, Regulations and Administrative Regulations

Law, regulations	Contents applied
Environmental Impact Assessment Methodology of PRC (effective since Sept. 2016)	Based on the *Law of Environmental Protection (*came into effectiveness in Jan. 2015) and new requirements faced by environmental management in the new era , the new *Law of Environment Assessment* revised 9 contents, especially it **cemented punishment measures** to those who start construction before seeking approvals on EIRs. The new *Law of Environment Assessment* also **streamlined administrative approval procedure for some projects but reinforcing planning environmental impact assessment**；Reinforcing punishment to law-breakers. Projects starting construction without seeking approvals are to be fined by 1% -5% of the total project cost and may be ordered to restore the original status. 1) Streamlining approving procedures and delegating power to lower levels. Approvals for environmental impacts from the administrative authorities are not deemed as a condition to approve FSR or projects. EA approval can be done with the FSR's approval or project's approval, but they must be done before construction. Meanwhile, approval on water conservation program from the

Law, regulations	Contents applied
	administrative authorities is not a condition of approval for environmental impact assessment. 2) Planning environmental assessment is an important basis of project environmental assessment; the Law reinforces punishment measures to planning authorities. It stipulates that if a planning authority doesn't organize an environmental impact assessment, or manipulates the assessment or there is dereliction of duties and this leads to false assessment results, the directly responsible officials or other related officials are to be given administrative punishment from higher level authorities or supervision authorities. 3) Planning preparation authorities should revise draft planning based on EIR and comments from the review group, if any; and provide explanation for the actions to respond to the conclusions of the EIR and comments from the review group. If there are no actions taken, justification is required. 4) To place planning environmental impact assessment as a rigid restriction for reviewing and approving project environmental impact assessment documents under planning.
Regulations of Planning Environmental Impact Assessment of Planning (August 2009)	5) The Regulation sets up three contents, namely, overall impact of ecological system in the related area and drainage area, long-term impact on environment and people, relationship amongst economic benefit, social benefit and environmental benefit as well as immediate interest and long-term interest; defines the main body of planning environmental assessment, main body of environmental assessment preparation and preparation methodologies , public consultation and implementation procedures, identifies clearly the main body of approval, procedure and effectiveness and establishes an accountability system and restriction system such as limited authority power for approval. Article 2. Departments concerned under the State Council , local governments and related units at city level or higher level in the planned area shall carry out environmental assessment for the land utilization, construction, development utilization and planning (comprehensive planning) and industrial , agricultural , husbandry, forestry, energy, hydraulic power, transport, urban construction, tourism, or natural resources development they plan. Article 30. In case that the total discharge volume of some key pollutant in the planned area exceeds the controlled volume required by the central government authorities or local authorities, the approval on EIR concerning a new project to be constructed in the area which will increase such pollutant discharge volumes should not be given.
Notice on Issuing Implementation Program of "13th FYP Environmental Impact Assessment Reform" (Huanping (2016)95) Effective from July 15)	1) To differentiate the focus under the strategy environmental assessment, planning environmental assessment and project environmental assessment, and build a seamless prevention system. **Strategy Environmental impact assessment** focuses on coordinating regional or cross-regional environmental issues, identifying red-lines, and providing the basis for Combining multi-planning into one, and planning environmental impact assessment as well. **Planning environmental impact assessment** focuses on optimizing industrial layout, scope, structure and proposing adverse lists to guide project environmental benchmark. **Project environment impact assessment** focuses on implementation of environment quality goals and management requirements, optimizing environmental protection measures, intensifying environmental risks prevention and control, linking with the pollution emission certificate. 2) To place planning environmental impact assessment as a rigid restriction for

Law, regulations	Contents applied
	reviewing and approving project environmental impact assessment documents under planning. 3) Environmental impact assessment shall focus on environmental justification on alignment, location , environmental impact forecast and risk control rather than on those contents which can be decided by markets or by other authorities based on laws. Environmental impact assessment should be reviewed and approved with alignment location, land pre-review and water conservation program. The comments from departments-in-charge for those projects which are related to natural reserves, drinkable water source protection and scenic areas should not be a condition of reviewing and approving of EIRs as long as they meet the laws and regulations. 4) Reinforcing supervision, deepening information disclosure and EIR, and guiding public consultation based on laws. The responsibilities of construction units should be identified and public opinion feedback system be set up. Making public opinions as an important measure to improve and strengthen project environmental protection. To punish those who manipulate public consultations. Construction units shall prepare public consultation notes and disclose it together with EIR.
HJ130-2014 Technical guideline on Planning Environmental Impact Assessment—General Principles	Through EIR, the required resources and environmental information under a planning are provided, and main resources constraining the planning implementation (such as land, water, energy, mineral resource, tourism resource, bio-resource, landscape resource and oceanic resource) and environmental elements (such as air, soil, sea, acoustic resource and eco-resource) are identified. Environment goal and assessment indicator systems are established. The overall impact posed by the planning construction on the ecological system in area, drainage area and sea area and impact of environment to public health are analyzed, forecasted and assessed. To justify environment rational of planning program and its sustainable development impact. To justify the possibilities of achieving environmental goals and index after planning implementation. To establish the relation between planning and environmental benefit and relation between immediate interest and long-term interest so that the basis for planning and environmental management can be provided. The Technical Guidance establishes the principles, contents, methods and requirements of environmental impact assessment of planning environment assessment.
Technical Guidance of Environmental Impact Assessment – Urban Rail Transit HJ453-2008	The Technical Guidance establishes the principles, contents, methods and requirements of environmental impact assessment of urban rail transit construction projects. Assessment contents include project construction phase and operation phase, covering all process, scope and activities during construction and operation. Generally, environmental impact considerations include noise, vibration, electromagnetism, waste water, waste gas, solid waste and elements related to ecological aspect. Engineering location and alignment, layout, equipment types and configuration as well as construction schemes are justified from environmental protection perspective. Project shall describe the actions taken to respond to the comments from EIR of urban rail transit network planning (or construction planning). Subsequent works of urban rail transit shall give descriptions on the relationship between the subsequent and previous works, review analysis of previous works and main conclusions of work acceptance.

Law, regulations	Contents applied
information disclosure and public consultation	
Notice on issuing of Guideline of government information disclosure of Environmental Impact Assessment of Construction Project (for trail) Nov.14 ,2013)	A construction unit shall disclose whole information of EIR and Environmental Impact Assessment Table (EIAT) when it submits them to environmental protection authorities. At the same time, the construction unit shall provide an attachment explaining the deletion of any national confidential information and commercial confidential information along with the reports. The environmental protection authorities shall review EIR and EIAT together with the explanation report and disclose them wholly based on laws.
Guidance on Boosting Public consultation of Environmental Protection (Huanban (2004) No.48)	It is to establish and perfect environmental public interest litigation system, identify scope, contents, way, channels and procedures of the public consultation, standardize and guide the public to participate environmental protection in an orderly manner; to strengthen the coordination and communication with judiciary authorities to provide judiciary guarantee for environmental protection, to formulate and take effective measures to protect informant from revenge. When a civil lawsuit for damage compensation caused by environment pollution is submitted, environmental protection administrative authorities should support for evidence collection and investigation on the pollution damage and other related activities.
Public consultation and Method for Environmental Protection (No.35 decree of MOE) (Effective from Sept. 1, 2015)	It guarantees the right of the public, legal persons and other organizations to access environmental information, participate and supervise environmental protection, smoothen participation channels, promote the public consultation in environmental protection, and its lawful and order development; encourage the public, legal persons and other organizations to involve environmental protection related public matters such as participation and formulation of policies and regulations, performance of administrative permits or administrative punishment, supervision of law infringement activities , publication and education activities and so on.
Announcement of Enhancing Environment Impacts Assessment with Environment Quality Improvement as the Core (Environment assessment [2016]No.150), October 26 2016	We are committed to environment management which takes environment quality improvements as the core. We will intensify environment impacts management through the implementation of the binding obligations of “three lines and one checklist”, establishment of “three linkages” mechanism, as well as information disclosure and public consultation. Specifically, the “three lines and one checklist” means ecological protection red line, environment quality baseline and resources utilization limits and negative checklists of environment admission, whilst “three linkages” linkage mechanism means the linkage mechanism among the EIA approval and planning, current project environment management and linkage mechanism of regional environment quality. The local government and relevant departments, together with construction units, will raise awareness of environment protection and spread knowledge and information to schools, communities and households using innovative methods.

2. Project Description

The China "Child" Project will be implemented by MOHURD and seven cities that represent a range of development stages and challenges. All participating cities cover Beijing, Tianjin, Shijiazhuang (city clusters of Beijing-Tianjin-Hebei Region), Ningbo (typical city of the Yangtze Delta in the eastern coastal area), Nanchang (typical city in Mid-China of Yangtze Economy Belt), Guiyang (western typical city) and Shenzhen (City cluster in Pearl Delta). The GEF grant of USD 32.75 million will contribute to technical assistance, capacity building and project management. Given limited funding, the project will not support any civil works. The project activities in each demonstration cities are detailed in Section 2.1 to 2.7.

Component 1: National Platform and Policy Support. The capacities of local governments to plan for sustainability are significantly affected by the relations between municipalities, regional or provincial authorities and national governance (vertical coordination) and between different agencies and policy divisions within municipal governments (horizontal coordination). The importance of vertical and horizontal coordination, or multi-level governance, is crucial in reducing the highly fragmented nature of city building. This project component will finance multi-level coordination both at the national level and amongst cities to further develop national policies, guidelines, strategies, and capacity building efforts for integrated urban planning and TOD. The national platform will aggregate the results of the city level activities and compile monitoring and evaluation indicators to issue regular progress reports. This component will be managed by the Project Management Office (PMO) established in Ministry of Housing and Urban-Rural Development (MOHURD).

Component 2: City Level Integrated Planning and TOD. This component would specifically support the seven cities in developing strategies and plans to better integrate land use and transport planning to create urban forms and space that reduce the need for private motorized vehicles, and increase transport and energy efficiencies. Depending on their focus, cities could develop a selection of conceptual land use plans, development schemes, streetscape and design guidelines, parking strategies, priority infrastructure investments, and financial plan for transit.

2.1 Beijing

This project will study TOD-related policy mechanisms, technical routes, guidelines, and assessment indicator system and demonstration programs systematically, so as to promote the demonstration and roll-out of TOD mode in Beijing as well as in Beijing-Tianjin-Hebei Region. The total budgeted grant of GEF is USD 3.8 million and detailed in Table 2-1.

Table 2-1 Project Activities in Beijing

Name	Key activities
BJ-1:Study of Beijing TOD-related developmen t system	1) Comprehensive diagnosis and study on TOD based on the master plan of urban rail development in Beijing: Given the Phase II construction plan of Beijing urban railway transport, carrying out studies on the grouping, connection, matching and grade division of TOD zone in line with Beijing's current status of land use and rail transit facilities. 2) Policies and mechanisms of TOD-related land use and traffic planning: Exploring the possibility and technical routes for integrating TOD with multiple regulations; Making synergic studies of key TOD links; Studying the joint development mechanism for urban rail transit and land use; and studying multi-category investment and financing modes. 3) Studies on TOD-related urban development and regeneration systems: Studying the land development intensity and mixed land development degree in TOD zone. 4) TOD-related urban land use and traffic planning design guidelines: Creating TOD urban planning and preparation technologies at macro, intermediate and micro levels. Studying and establishing urban design and traffic planning design guidelines representing TOD philosophies and principles.

Name	Key activities
BJ-3 TOD-based pilot projects to improve functions of urban rail transit line and optimize land use	1) The project will study the functions of urban rail transit lines and stations that are to be completed after 5 years (e.g. Line 17 and Pinggu Line). Activities include optimizing the line direction and deployment of stations, as well as determining the various function types of different line sections and stations. And this line is used as a subject for sorting land uses alongside, clarifying land use resources, optimizing the land use planning around stations, optimizing and configuring land development density and land use types. 2) The project will then select a station area of a typical existing urban function area (the Dongdaqiao Station of Line 17) and a new function area (the Weilai Kejicheng Beiqu Station and Ciqu Station of Line 17) to carry out comprehensive planning and design for TOD zone, including comprehensive development of land, transportation, industry, economy resources and environment and subway upper covers, and conducting overall planning and configuration for surrounding areas on the basis of high-quality public transport and in the direction of public transport. So far, the above-mentioned demonstration project is at the initial design stage.
BJ-5 TOD-based planning and construction for urban regeneration	The project will select one or two urban functional districts, with the Huilongguan Town of Changping District or Tiandiyuan District as the typical representative, to carry out overall planning and demonstrative construction, covering land use, transport, industrial sector, economy, resources and environment and railway transit, planning and configuring the surroundings with public transport-orientation and high-quality public transport.

2.2 Tianjin

The objective is to improve the city's comprehensive sustainable development capacity, as well as to improve the service capacity and efficiency of traffic infrastructure. The proposed project will allocated USD 3.8 million of GEF grants. The detailed activities are seen in **Table 2-2**.

Table 2-2 Project Activities in Tianjin

Project Name	Key Activities
TJ-1 TOD-based comprehensive development study of Tianjin central area	Based on the current status of urban traffic development and comprehensive plan, combined with the existing urban development and future trend of development, the consulting company will study on the following content: 1) Assessment of status quo development along the rail transport route 2) Conclusion of domestic and foreign development experiences on urban railway development; 3) Researches on the interactive relationship between city functions and rail transport network as well as optimization and adjustment suggestions; 4) Overall strategy for the development of rail transport stations 5) Overall strategy for the traffic development of rail transport stations 6) Guidance for the planning and design of categorized stations. 7) Publicity and promotion;
TJ-2 Opportunities and strategies of participation of private sector in urban infrastructures development	Against the backdrop of PPP mode encouraged by the country, this project will research the rational plan for introducing social capital into urban traffic construction field, by studying the financing, construction, operation and integrated regional development of central urban area TOD-related project, parking facilities, public biking, sponge city and integrated underground pipeline networks. The research topics are: 1) Best practice of PPP-mode national and international public transport infrastructures 2) PPP-related policies and mechanism of Tianjin and China 3) PPP key project in public transport of Tianjin 4) Overall plan of PPP development in public transport of Tianjin 5) Route researches for PPP mode urban construction region; 6) Publicity and promotion

Project Name	Key Activities
TJ-3 Low-carbon travel and sustainable development of transport in Tianjin central urban area	The project will target on the existing road facilities of the central urban area, on the basis of analyzing the slow-travel structure of Beijing as well as public cycling demonstration program introduced by WB loaned Tianjin urban traffic improvement project, to propose the rehabilitation plan for the existing road networks. The research topics include: 1) Analysis of the status quo of cycling in the central urban area; 2) Analysis of Traffic demands by cycling in the central urban area; 3) Analysis of planning cycling lane in the central urban area; 4) Implementation plan of recent construction of cycling lane in the central urban area; 5) Analysis of status quo of public transport and slow traffic networks along the line; 6) Analysis of traffic demand; 7) Optimization and adjustment plan of public bus routes along the line; 8) Assessment and optimization of public transport network; 9) Assessment and optimization of slow travel networks in areas along the line; 10) Centering on railway, systems and mechanisms adaptable to the synergy of rail transport, bus, walking and cycling.

2.3 Shijiazhuang

The project area of Shijiazhuang is located in Zhengdingxin District of northern bank of Hutuo River, which is also the crucial economic development axis connecting Shijiazhuang and Beijing. Shijiazhuang has the GEF grant of USD 5 million, the project activities is detailed in Table 2-3.

Table 2-3 Project Activities in Shijiazhuang

Project Name	Key Activities
SJZ-1 Shijiazhuang spatial planning and strategies based on TOD	1) Shijiazhuang TOD-based spatial planning and strategies 2) Zhengdingxin District TOD-based sponge city planning, design as well as suggestions; 3) TOD-based assessment report on the aspects of traffic, society and environment.
SJZ-2 Comprehensive TOD traffic monitoring of the key development area under intelligent city basis	Comprehensive TOD traffic monitoring platform of the key development area under intelligent city basis
SJZ-3 Integrated development plan of Low-carbon community and industrial park under the TOD mode.	1) Demonstration project and special lane planning of public cycling system in the new area; 2) Comprehensive development plan for the surrounding low-carbon communities in the typical stations; 3) Layout and plan of low-carbon high-tech industrial parks under the TOD mode.
SJZ-4 Ecological Development Plan along the corridor of rapid bus transport	Ecological development plan along the corridor of rapid bus transport

2.4 Ningbo

The objective is to establish an integrated development mechanism of unifying and coordinating the plans of multiple sectors and promote the improvement of TOD city development model in Ningbo so as to optimize its urban spatial structure and functional layout, propel resources to be allocated and utilized more effectively and improve residents' life quality, making the city realize its development in an intensive, intelligent, environment-friendly, low-carbon and sustainable way. The total grant of GEF is USD 4.6 million. The detailed activities are shown in Table 2-4.

Table 2-4 Project Activities in Ningbo

Project Name	Key activities
NB-1 Strategic studies on TOD-based Ningbo spatial layout	Based on the planning for the urban rail network and passenger terminals in Ningbo, the major zones should be clearly delimited where TOD policies should be firstly implemented within the spatial scope of the main urban districts; by reference of the best practices at home and abroad, the overall TOD development program should be worked out; the capabilities and scales should be ascertained of investing and financing the construction of TOD-supported rail transport facilities and other related traffic infrastructures in these zones; the control indicators of planning and design should be defined to guide the future TOD planning and construction of Ningbo; and by using the integrated transport planning model, the traffic impacts of TOD development strategy should be evaluated, and the social and environmental impacts of the TOD development strategy should also be assessed. Meanwhile, based on the study outcomes of TOD strategy, the recommendations should be fed back to the urban spatial development strategy of Ningbo. To help develop the City TOD sharing platform and a series of extendable toolkits, including tools for sharing, studying, cooperation, visualization, analysis and planning, as well as assessment and measurement and monitoring of impacts, so as to facilitate the pilot cities to evaluate and monitor the long-term environmental, social and economic costs and benefits brought by different transit-oriented intervenes.
NB-2 TOD-based plan, design and implementation on rail transit line	Using an urban rail line as a pilot to coordinate multi-sector plans, incorporating the best national and international practices, through detailed TOD planning and design along the urban rail line, this component will further explore the mode of integrating urban transport facilities construction and land use development management so as to realize the financial sustainability in urban infrastructure construction and sound development of urban land. Meantime, it is carried out the technical review the comments the third revision of rail transit planning of Ningbo City.
NB-3 Study on the improvements of built-up rail lines under the TOD mode	Using an competed urban rail line to analyze the outstanding problems and weakness of railway construction on non-traffic function, using the outcome of SCI-NB-1; Through overall comparison under TOD development mode, by reference of the best practices at home and abroad, providing diagnosis and recommendations for this rail line: 1. For the existing subway stations, thoroughly combing the underground spatial development, propose reasonable and feasible suggestions, so as to improve the accessibility and connection mechanism of the subway entrance; 2. Based on the promotion of massive scale of underground pipeline networks, promoting the completeness of TOD development mode and studying the construction methods based on railway construction; 3. Clarifying the counterpart connection facilities of subway stations and propose recommendations for improvement, including the public bus system surrounding the sites, slow system improvements, integration of data platform, development and censorship of relevant application software.

2.5 Nanchang

TOD studies in Nanchang mainly focus on Metro line 1 (official operated in the end of 2015) and metro line 2 (under construction). The project will put emphasis on study of sounding area of Metro Line 2 and TOD-oriented developments along the rail. Based on this, TOD study will be applied to the whole city and incorporated in city's master planning. The project investment is 5.35million USD, of which, 5 million USD from GEF grant and 0.35 million from counterpart funding. The detail project activities are shown in Table 2-5.

Table 2-5 Project activities in Nanchang

Project name	Key activities
NC-1: Study on TOD and low	Study on TOD and low carbon city of Nanchang; study on morphology

Project name	Key activities
–carbon sustainable development in Nanchang	and style of low carbon city of Nanchang; study on land use in low carbon city of Nanchang
NC-2: Package 2 of Technical assistance consulting service component in Nanchang	1) Study on TOD-oriented spatial layout strategy and path of Nanchang 2) TOD master plan of Nanchang 3) TOD design guidance, policy guideline and adverse list of Nanchang 4) Monitoring and appraisal of TOD strategy implementation of Nanchang
NC-3: Package 3 of Technical assistance consulting service component in Nanchang	1) Study on Transit Line 2 TOD pilot project in Nanchang 2) Study on TOD pilot of BRT corridor from Lanshan to downtown 3) Study on TOD pilot of Jiulong Lake New Town in Nanchang

2.6 Guiyang

Based on relevant planning studies, a set of comprehensive solution scheme and implementation path will be formed for TOD-oriented sustainable transport development, the project in Guiyang will promote "multi-plan integration" by taking urban land use planning, industry development planning and transport construction planning into consideration together. The total grant of GEF is USD 5 million. The detailed activities are shown in Table 2-6.

Table 2-6 Project activities in Guiyang City

Project name	Key activities
GY-1: Study on Transport demand and need modular and transport development strategy in Guiyang	1) Comprehensive transport survey in Guiyang 2) Comprehensive transport model in Guiyang 3) Transport development guidance (2016-2030); analysis on the transport status quo and challenges; overall transport development objectives; major strategies, policies and actions of transport development in Guiyang.
GY-2: studies on sustainable development model and performance appraisal of modern comprehensive 3-dimensional transport system under Building up Guiyang to an Innovative Central City	1) appraisal of comprehensive sustainable transport development in Guiyang and analysis on challenges； 2) demand analysis on modern, comprehensive and 3-dimensional transport system in Guiyang 3) construction of sustainable development model of modern comprehensive 3-dimensional transport system under Building up Guiyang to an Innovative Central City 4) Indicator system design for sustainable development appraisal of modern comprehensive 3-dimensional transport system in Guiyang. 5) Study on appraisal of mechanism and performance method of sustainable development of modern comprehensive 3-dimensional transport system.
GY-3: Development planning around Metro line 3 and metro line S2.	1) Improve TOD comprehensive development planning of sustainable city of Guiyang from planning perspective. 2) Prepare comprehensive development plan along metro line 3 and metro line S2 taking consideration of TOD comprehensive development planning of sustainable city of Guiyang and the planning of existing rail line 1 and 2
GY-4 Development of intelligent bus with big data, establishment of modernized urban transport system.	1) TOD-oriented and big data based top-level design and action program of transport sector transform and upgrade 2) TOD-oriented and big-data based design for intelligent transport dispatch and management system. 3) Study on TOD -oriented and big-data based intelligent transport information system 4) Study on optimization of TOD-oriented BRT and Rail transit and bus-route 5) Study on the leading role BRT design plays in the city construction and economical development and policies

2.7 Shenzhen

The project area in Shenzhen locates in Shenzhen International Low-carbon City (SILCC) of northeast of Shenzhen, an intersection of three adjacent cities: Shenzhen, Huizhou and Dong'guan. This area is a typical depression in Shenzhen's rapid development, with relatively lower development level, higher carbon emission, and existing properties accounting for more than 60% of total construction area in Shenzhen. The SILCC is aims to apply the TOD development concept and "multi-plan integration "urban planning. As result, a replicable, and sustainable comprehensive development model be explored and demonstrated, and to deepen Shenzhen's high-quality stable growth and sustainable overall development. GEF grant of USD 3.8 million is allocated to Shenzhen project. The details are shown in Table 2-7

Table 2-7 Project Activities in Shenzhen

Project Name	Key Activities
SZ-1: Study on adaptability of TOD concept in Shenzhen	1) Study on TOD development strategy 2) Study on planning , strategy and mechanism of Shenzhen's TOD development 3) Study on public safeguard system of Shenzhen's TOD development 4) Study on multi-dimensional and overall process management system of Shenzhen's TOD development
SZ-2: Study on planning and management of TOD based SILCC	1) Study on master planning of TOD based SILCC 2) Study on TOD-based design and regulatory detailed planning for communities around typical transit hubs 3) Study on construction management of TOD based SILCC. 4) Study on implementation scheme of planning and construction of intelligence management platform for TOD based SILCC

2.8 MOHURD

The consulting contract of "Strategies and technical studies for city TOD development with the design and application of management toolkits in China", (No.: MOHURD-1), which is implemented by the Ministry of Housing and Urban-Rural Development is endowed with GEF grant of USD 1.93 million. The main content includes in the Table 2-8.

Table 2-8 Project Activities in MOHURD

Project Name	Key Activities
MOHURD-1-1 Collection, monitoring and follow-up analysis platform of TOD city big data:	Unified technical standards will be adopted for data collection and background analysis, with the seven cities and city clusters as the benchmark; 1) Establishing the standards for collecting GIS-based basic data; 2) Establishing the standards of building platform structure and visualized interface; 3) Establishing the linkage mechanism between MOHURD and data platform of each city; 4) Integration and analysis of big data.
MOHURD-1-2 Case study of TOD projects	The project will study adjustment and implementation of control indicators, transport connections and integration approach, city design and public space management policies, finances and investment manners, etc. Specifically, it will conduct case studies of TOD-oriented development of existing cities and city clusters at home and abroad, summarizing the key points of planning for different TOD projects in a range of cities or city clusters, city design and space improvement methods, traffic connection and integration mode, finances and investment manners. In the course of rolling out, the project will draw in the lessons learnt from global practices and further establish feedback mechanism,

Project Name	Key Activities
	eventually contributing to the formation of targeted implementation examples to guide the promotion of TOD-oriented projects in China.
MOHURD-1-3 TOD-oriented city development policies, standards and indicator system	1) In view of the existing TOD-related development guidance and assessment standards, indicator system on planning design, management, operation and actual public benefits will be designed into different categorizations for different cities. 2) With the establishment of big data platform, the method and range of indicator collection will be defined as a way of improving the indicator appraisal system in a standard and operational way. 3) In view of the survey results and the development status of seven cities, make up the policies favorable to the TOD development and further suggestions and recommendations to the targeted groups, on the aspects of land transfer, flexible development of land, optimization of public transport connection, expansion and convergence of walking environment, utilization of underground space, incentives of public space supply and volume rate, etc.
MOHURD-1-4 Capacity Building	Workshops, forums, domestic and overseas professional trainings and study tours will be held on a regular basis. The objective is to improve the professional skills for project management staff, technicians of each subcomponent, governmental departments, principals of development units, as well as operational management of TOD projects for relevant staff.

3. Environment Impacts, Assessment and Management

Both China and the World Bank assess and manage possible environmental impacts through different methods respectively according to different types of activity/output. After careful research of the three-year action plans of the MOHURD and seven demonstration cities, the project activities/outputs are regrouped into several categories for the ease of environmental maangement. Preliminary screening of downstream impacts of these TA activities on the environment and resources has been made too, See Table 3-1 for details.

For those activities with potential environmental impacts as pointed out in Table 3-1, their impacts on environment and resources need to be systematically analyzed and assessed (methods for assessment see Annex 1) during the process of carrying out these TA activities. Based on the assessment, measures to avoid or mitigate the adverse impacts and maximize benefits will be recommended to feed into the finalization of relevant TA activities' outputs (policies, planning and design guidelines etc). There are mainly two ways to feed relevant suggestions into project activities and their final results:

(1) In the Terms of Reference (TOR) of these TAs:

Include requirements to assess the environmental impacts of the draft output and to optimize the final output with the recommendations from such environmental assessment. The qualification of the TA consultant team needs to have the environmental expertise to do the work. Although this type of environmental analysis slightly lacks independence, correction and amendment can be made through consultation with government agencies, experts, civil society and the public.

(2) Engage Independent third-party EA institute (or individual expert):

To conduct environmental assessment on the TA's draft results/reports, optimizing final TA research result with the recommendations from such environmental assessment. However, this method faces the risk of encountering difficulty in integrating the suggestions received into the result of technical assistance research. In addition, it may require more time and budget.

The two methods above both have their advantages and disadvantages. We suggest:

Method (2) could be adopted mostly in TA activities with relatively far-reaching and profound impacts , including TOD planning in demonstration activities such as newly constructed transportation corridor, future functional area, route and land use along the route, as well as strategy and policy research (activity category 4 and 5.1 in Table 3.1);

Method (1) could be employed in all other situations.

Table 3-1 Environment Impacts Analysis and their Management Requirements by Activities/Outputs

Project city	Beijing	Tianjin	Shijia-zhuang	Ningbo	Nan-chang	Gui-yang	Shen-zhen	MOHURD	Resources and Environmental Impacts	WB and National Environmental requirements
1. Technical advisory (TA) activity										
1. TOD diagnosis analysis, existing problems and demand, case study, data platform etc.	BJ-1	TJ-1	SJZ-1 SJZ-4 SJZ-5	NB-1	None	GY-1	SZ-1	M-1-1 M-1-2	None	None
2. Station planning guidance, design guide rule, control indicator and etc.	None	TJ-1	SJZ-2	NB-1	NC-2	None	None	M-1-3	Different planning design standards and guide rules will lead to different city forms ("people-oriented" or "automobile-oriented"), consequently with different **energy consumption** (oil consumption and greenhouse gas (GHG) emission ensued) created, automobile size, corresponding automobile **exhaust emission** and urban **air pollution** (dust-haze created by PMs such as NO and hydrocarbon created by automobile exhaust emission), **road safety** and **health**.	**National requirements:** Planning environmental guide rule should be considered in composing chapter or explanation concerning environmental impact assessment. **World Bank requirements:** Environmental factors such as carrying capacity of resources and assimilation capacity of the environment should be included into TA and result, i.e. the draft study report needs to have a chapter on analyzing impact on environment and resources. Its recommendations are used to optimize final research result /report. Detailed requirements refer to Annex 1.
3. Research on mechanism, laws and regulations, procedure, development intensity, model and etc.	BJ-1	TJ-2	SJZ-2 SJZ-4	None	NC-2	None	SZ-1	M-1-3		
4. TOD development strategic research and policy making.	None	TJ-2 TJ-3	SJZ-1 SJZ-4	NB-1 NB-3	NC-1	None	SZ-1	M-1-3	"People-oriented" city scale design and reasonably **mixed types of land use** will promote nearby employment, reduce commute time and bring down relevant energy consumption and carbon emission; otherwise, adverse impact will be increased. **High-capacity public transport** can bring down energy consumption and	**National requirements:** Currently there is no binding law and regulation; however, as an important task of environmental assessment reform during the thirteenth Five Year Plan, the Ministry of Environmental requests "carrying out policy environmental assessment pilot.

Project city	Beijing	Tianjin	Shijia-zhuang	Ningbo	Nan-chang	Gui-yang	Shen-zhen	MOHURD	Resources and Environmental Impacts	WB and National Environmental requirements
									related carbon emission. Different **travel modes** can reduce automobile exhaust emission and urban air pollution.	**World Bank requirements:** Carry out strategic environmental assessment (SEA) for strategy, plans and policy. See Annex 1 for detailed requirements.
5. Application of TOD in real cases as demonstration										
5.1 New/planned transportation corridor, future functional area, route and station TOD planning, or optimization and land use along the route	BJ-2	None	SJZ-3	NB-2	NC-2 NC-3	GY-1 GY-2 GY-3	SZ-2	None	1) Change long-term travel modes and their relevant proportions, affecting **energy consumption**, **carbon and air pollutants, road safety** etc. 2) Changes **urban layout**, way of **flood and drainage**, blockage of **groundwater, odor of subway ventilation pavilion,** etc. **Emergency ventilation**; 3) **Vibration** and **noise** from rail transit operation. Interface area of railway traffic networks and noise sensitive area (such as residential area, schools, hospitals, etc). 4) Induced **Economic activity** and population, affecting **industrial structure, employment** and resources e.g. water and cultural. 5) **Landscape aesthetics**, influences of visual intrusion and aesthetics.	**National requirements:** Carry out regional (development area) environmental assessment, planning environmental assessment. See Table 1-1 Technical Guide on Planning Environmental Impact Assessment — General Rule HJ130-2014 for detailed requirements. **World Bank requirements:** Carry out SEA for strategy, plans and policy. Detailed requirements on SEA are shown in Annex 1.
5.2 improvement and optimization through TOD concept of existing urban area and corridor	BJ-3	TJ-3	None	NB-3	NC-3	None	None	None		
2. Capacity Building										
Seminar, tour study, online learning etc.	√	√	√	√	√	√	√	√	None	Training content covers project environmental management and sustainable development of low carbon city.

4. Information Disclosure, Public Consultation and Participation

4.1 Information Disclosure and Public consultation for Environmental Management Framework

4.1.1 Information Disclosure for this Environmental Management Framework

According to the requirements of OP4.01 and PRC's relevant regulations on public consultation, the first round disclosure was conducted on the websites of national PMO (MOHURD) and seven project cities from the 20 October to 1 November 2016. The disclosed duration was at least 2 weeks.

The eight PMOs disclosed this draft EMF on the local website and request the comments from the effected people and relevant agencies. The disclosed information link is shown below Table 4-1. The screen capture of the PMOs information disclosed are shown in the Figure 4-1~ Figure 4-7.

Table 4-1 Information disclose link summary

NO.	PMO/City	Link	Duration of disclosure	Site of the disclosure
1	MOHURD	http://114.242.72.198/	2016-10-30	MOHURD - governed website
2	Beijing	http://www.bjjs.gov.cn/tabid/662/InfoID/106072/frtid/4299/Default.aspx	2016-10-24 2016-11-8	Beijing Municipal commission of housing and urban-rural development
3	Tianjin	http://www.tjcac.gov.cn/xxgk/tzgg/201610/t20161020_45772.html	2016-10-20	Tianjin Urban & Rural Construction Commission
4	Shijiazhuang	http://www.sjz.gov.cn/col/1274081553614/2016/11/01/1477983112949.html	2016-11-1	Shijiazhuang Municipal Government
5	Ningbo	http://www.nbjs.gov.cn/GB/show.aspx?id=40935&path_id=000000000100008	2016-10-21 2016-11-5	Ningbo Housing and Urban-Rural Development Committee
6	Nanchang	http://www.nc.gov.cn/xwzx/tzgg/201610/t20161024_833269.htm	2016-10-21 2016-11-4	Nanchang Municipal Government
7	Guiyang	http://jtj.gygov.gov.cn/art/2016/10/31/art_27973_1067312.html#	2016-10-31 2016-11-14	Guiyang Transportation Committee
8	Shenzhen	http://www.szpb.gov.cn/xxgk/qt/tzgg/201610/t20161025_5012815.htm	2016-10-24 2016-11-4	Shenzhen Development Perform Committee (DRC)

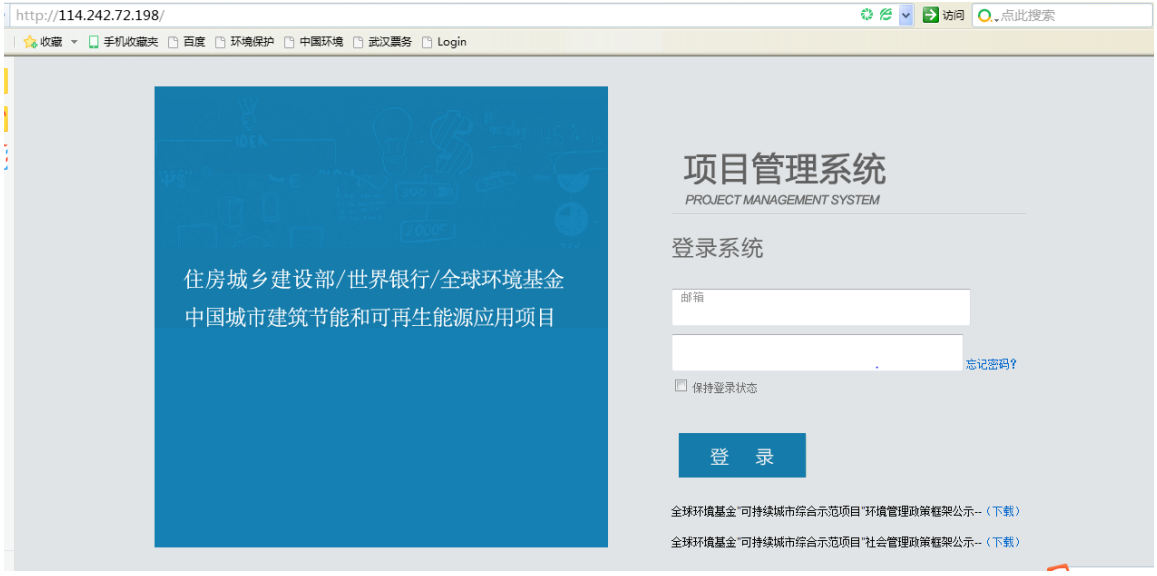


Figure 4-1 Information disclosure on MOHURD - governed website

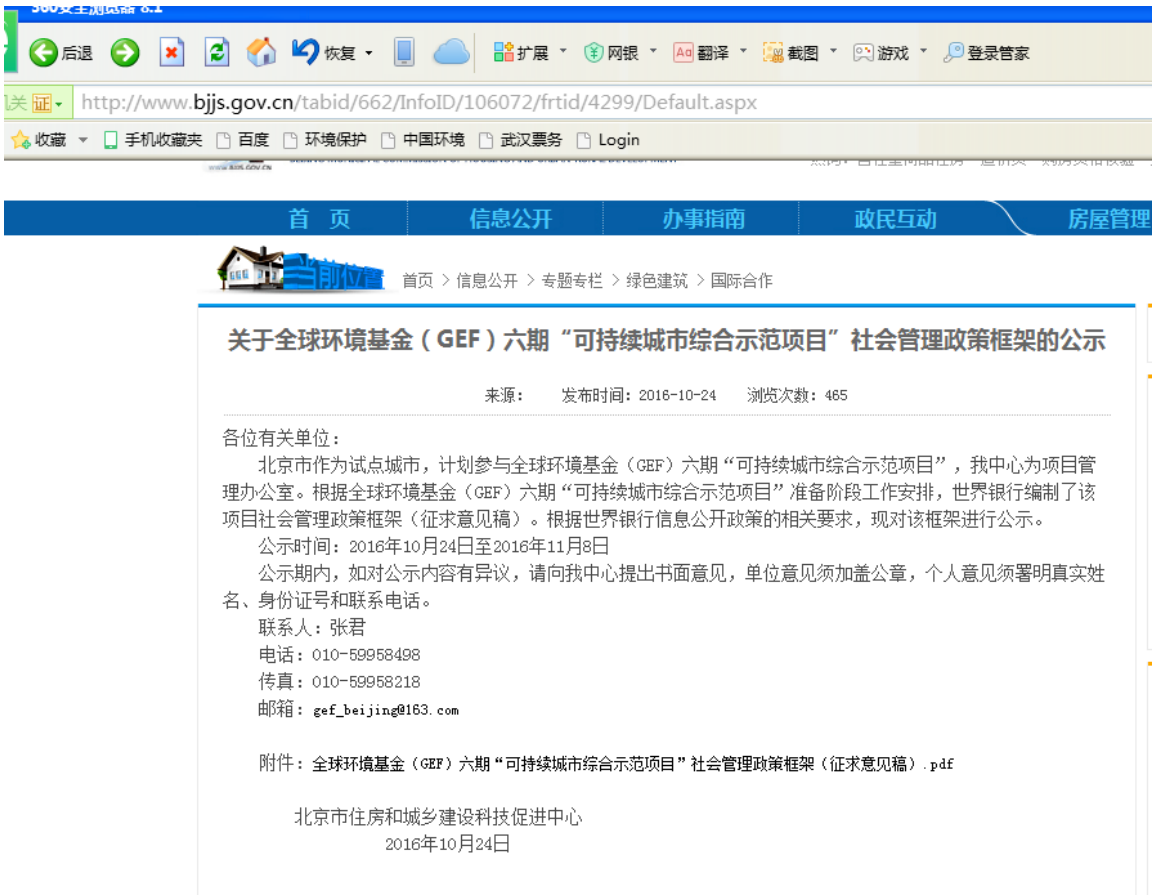


Figure 4-2 Information disclosure on Beijing Municipal commission of housing and urban-rural development

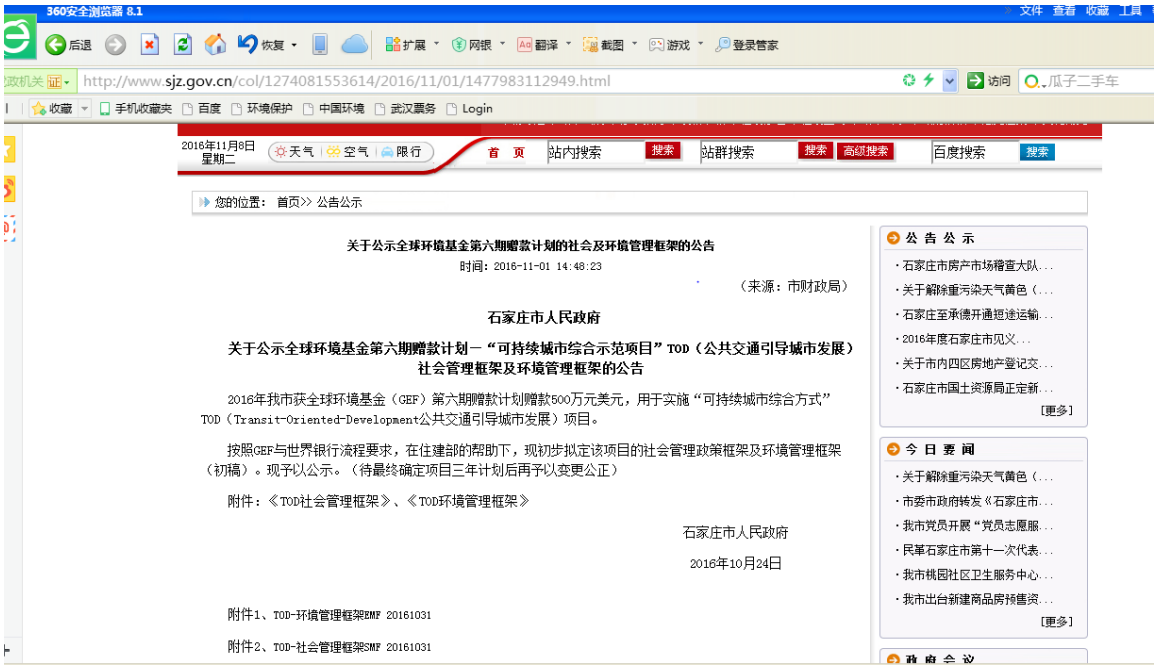


Figure 4-3 Information disclosure on Shijiazhuang Municipal Government

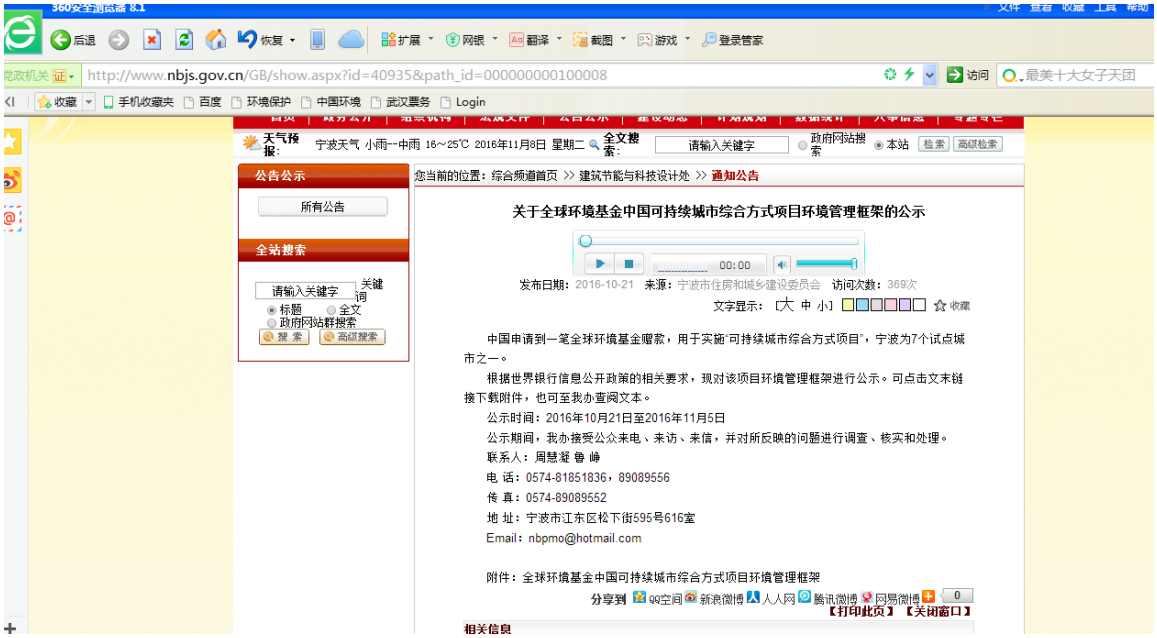


Figure 4-4 Information disclosure on Ningbo Housing and Urban-Rural Development Committee

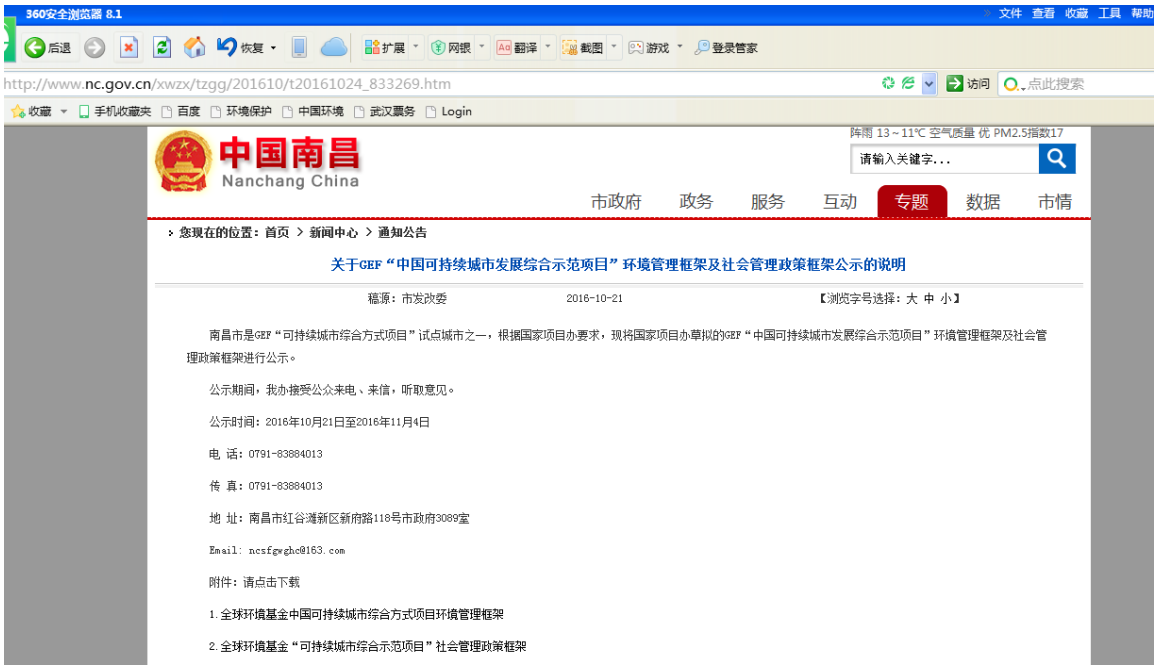


Figure 4-5 Information disclosure on Nanchang Municipal Government

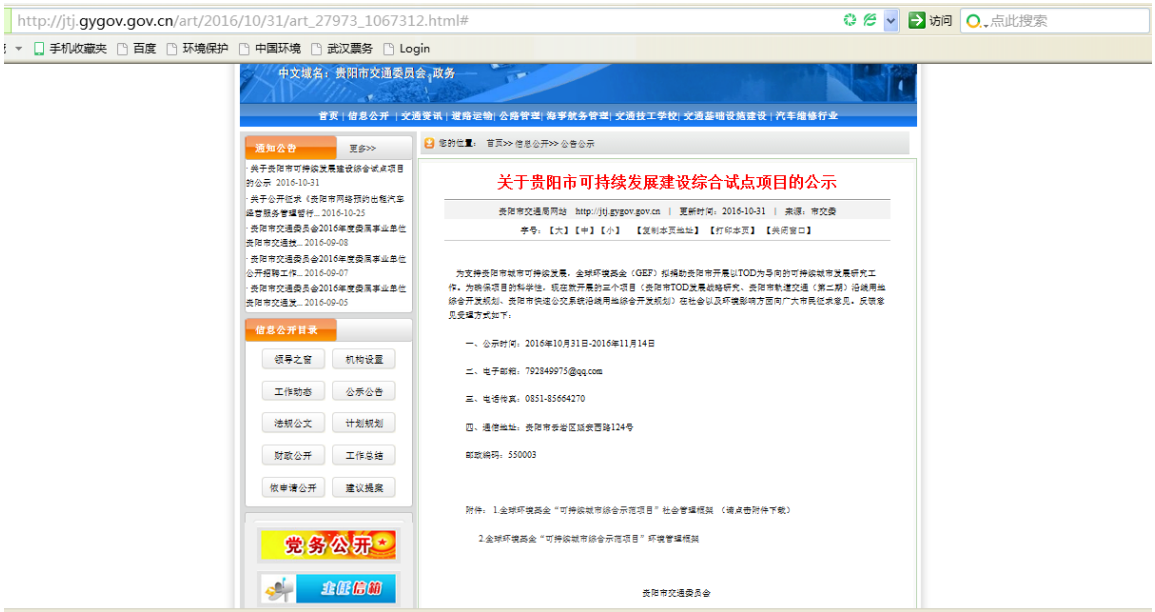
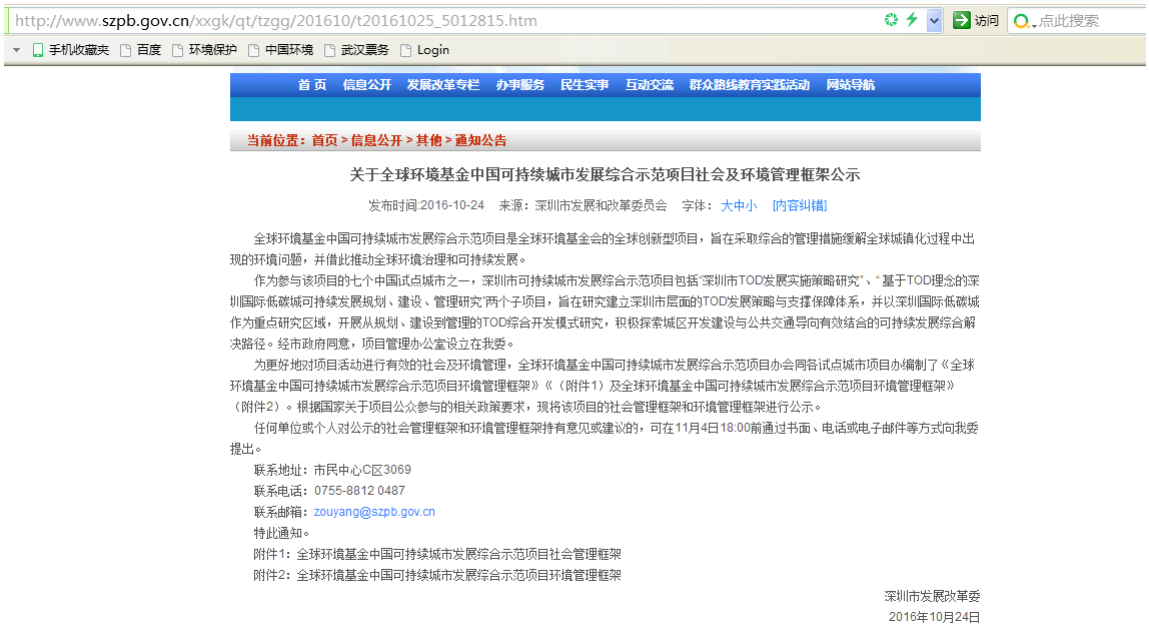


Figure 4-6 Information disclosure on Guiyang Transportation Committee



http://www.szpb.gov.cn/xxgk/qt/tzgg/201610/t20161025_5012815.htm

手机收藏夹 百度 环境保护 中国环境 武汉票务 Login

首 页 信息公开 发展改革专栏 办事服务 民生实事 互动交流 群众路线教育实践活动 网站导航

当前位置：首页 > 信息公开 > 其他 > 通知公告

关于全球环境基金中国可持续城市发展综合示范项目社会及环境管理框架公示

发布时间:2016-10-24 来源：深圳市发展和改革委员会 字体：大中小 [内容纠错]

全球环境基金中国可持续城市发展综合示范项目是全球环境基金会的全球创新型项目，旨在采取综合的管理措施缓解全球城镇化过程中出现的环境问题，并借此推动全球环境治理和可持续发展。

作为参与该项目的七个中国试点城市之一，深圳市可持续城市发展综合示范项目包括"深圳市TOD发展实施策略研究"、"基于TOD理念的深圳国际低碳城可持续发展规划、建设、管理研究"两个子项目，旨在研究建立深圳市层面的TOD发展策略与支撑保障体系，并以深圳国际低碳城作为重点研究区域，开展从规划、建设到管理的TOD综合开发模式研究，积极探索城区开发建设与公共交通导向有效结合的可持续发展综合解决路径。经市政府同意，项目管理办公室设立在我委。

为更好地对项目活动进行有效的社会及环境管理，全球环境基金中国可持续城市发展综合示范项目办会同各试点城市项目办编制了《全球环境基金中国可持续城市发展综合示范项目环境管理框架》《（附件1）及全球环境基金中国可持续城市发展综合示范项目环境管理框架》（附件2）。根据国家关于项目公众参与的相关政策要求，现将该项目的社会管理框架和环境管理框架进行公示。

任何单位或个人对公示的社会管理框架和环境管理框架持有意见或建议的，可在11月4日18:00前通过书面、电话或电子邮件等方式向我委提出。

联系地址：市民中心C区3069

联系电话：0755-8812 0487

联系邮箱：zouyang@szpb.gov.cn

特此通知。

附件1：全球环境基金中国可持续城市发展综合示范项目社会管理框架

附件2：全球环境基金中国可持续城市发展综合示范项目环境管理框架

深圳市发展改革委

2016年10月24日

Figure 4-7 Information disclosure on Shenzhen Development Perform Committee

Shenzhen PMO disclosed the EMF in the affected communities in the pilot area from 24th Oct. to 4th Nov. 2016. The photos are shown in the Figure 4-8.

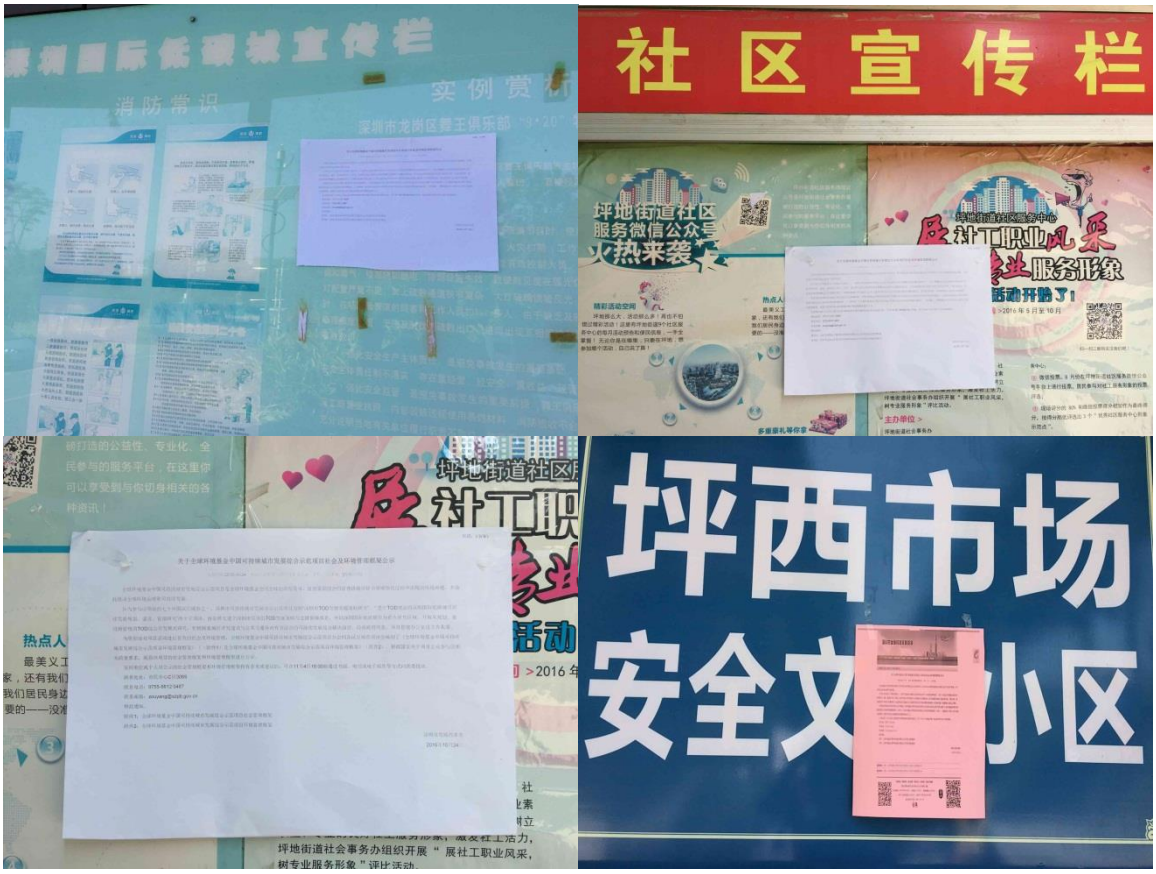


Figure 4-8 Information disclosure on Shenzhen Pilot Project Community

4.1.2 Public consultation for this Environmental Management Framework

Since the PMOs did not receive feedback from the effected persons and the agencies after disclosure and in order to proactively collect comments and suggestions of influenced groups on this EMF, each PMO informed relevant agencies about the WB's safeguard requirements on Environment and related national policies after the disclosure of EMF, through various ways such as telephone, letters, interviews, workshops and so on, fully collecting feedbacks of relevant agencies at the stage of project design.

For example, on October 31st 2016, Nanchang PMO held a workshop, during which the director of Project Leading Group for Nanchang GEF City Sustainable Development Project, gave a brief introduction of the disclosed EMF document, PMO reported on the GEF institutional building, main content and application progress of the project, and the director of planning division of Nanchang DRC (i.e. Nanchang PMO) made a summary of the session. The feedbacks of relevant departments are depicted as below:

(1) Nanchang EPB said, the current EIA covers "Project EIA" and "Planning EIA", however, the "Policy EIA" put forward by this EMF is the very first case in Nanchang, with no precedent at all. They suggest defining the specific guidance and procedures for implementation, in accordance with relevant policies and regulations.
(2) Nanchang Construction Bureau said, detailed suggestions will not be provided until it comes to the project preparation of next stage, as they find it difficult to give comments and suggestions in consideration of large-scale range of the disclosed EMF.
(3) Nanchang Urban-Rural Construction Committee had no objections on EMF on the whole. They suggested adding more to the low-carbon city subcomponent, such as energy conservation, energy-efficient buildings and renewable energy, etc.
(4) Nanchang transport bureau had no objections on EMF on the whole. They suggested formulating TOD study plans at micro, medium and macro levels based on the master plan of Nanchang, as a way of pushing on Nanchang TOD development in a comprehensive way.

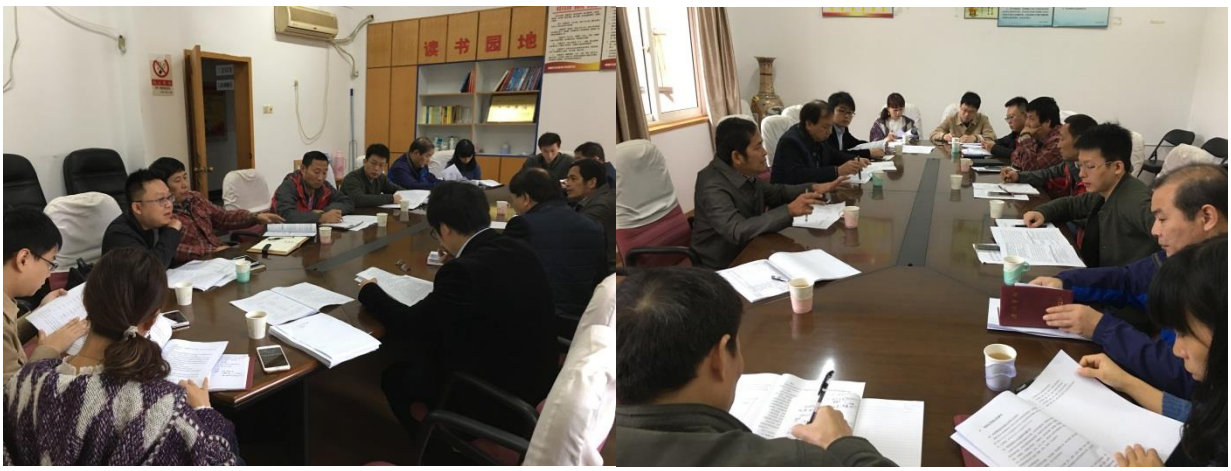


Figure 4-8 Public consultation workshop of EMF in Nanchang

Shenzhen PMO held a public consultation workshop of EMF in Shenzhen green and low-carbon development promotion center on November 7th 2016. The attendees were representatives from Shenzhen GEF PMO, Government of Longgang District (where most demonstration activities for Shenzhen are located), experts of relevant industries (Peking University Shenzhen Institute, Shenzhen Graduate Institute of Harbin Institute of Technology, Shenzhen Hanyu Environmental Technology Co. Ltd), residents from Pingdi Street of Longgang District, low-carbon

environmental NGO, totally 14 people. Dr. Qiulin, Director of Shenzhen GEF PMO, introduced the project profile and ESMF and answered questions in details for representatives in the workshop. The representatives also gave some suggestions and recommendations on this EMF. The feedbacks were summarized as below:

(1) In the general opinion of the representatives, the EMF is too professional and awkward to read, failing to express its meaning in a Chinese way. To some extent, it will lead to certain misunderstandings among the public.

(2) The representatives of Longgang government and urban planning experts proposed that, environmental problems shared by the seven cities is of great concern to the community. Thus it will be reasonable to upgrade the management standards for the EMF properly. The experts and local government suggested introducing more specific guiding environmental requirements such as adding indicators of carbon emissions EA etc.

(3) In the opinion of Longgang District Government, local residents, environmental experts and urban planning experts, the boundary of environmental impacts assessment should be defined more clearly, such as project boundary and sources of environmental impacts, so as to define the potential environmental impacts of the project. For the range of potential environmental impacts of the WB project, a preliminary evaluation will be conducted; for the source of environmental impacts, the uncontrollable factors should be taken into consideration based on the actual ecological conditions of low-carbon city, e.g., if it relates to water pollution, the uncontrollable influences of upstream pollution sources from other region should be considered.

(4) According to the environment experts, the EMF mentioned about strategic EIA (SEA) on policies. Such Policy EA corresponds to the planning EIA in China. To avoid confusion, they suggest to make reference to the national planning EIA when carrying out SEA for this project.

(5) According to the NGO representatives, relevant provisions of EMF should be adjusted or amended according to project implementation status.

(6) According to the NGO representatives, more diversified and effective mechanisms should be developed to facilitate information disclosure and public consultation.

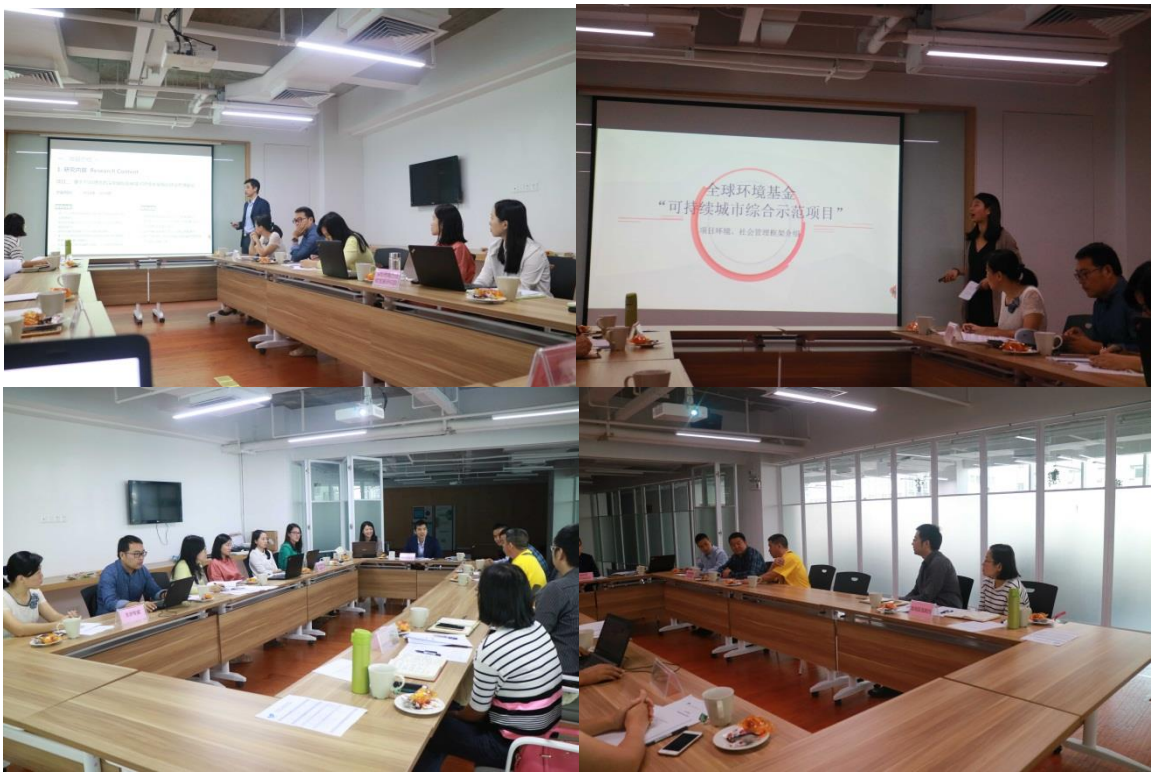


Figure 4-10 Public consultation workshop of EMF in Shenzhen

From November 3rd to 14th, a public consultation was held by Shijiazhuang PMO to collect opinions of the impacted people in Zhengding New District, as shown in Table 4-2 for details.

Table 4-2 Records of Public Consultation of ESMF by Shijiazhuang

Date	Stakeholders	Feedbacks
November 3rd 2016	Staff of Zhengding Airport and Railway Station, residents of Zhengding County	They inquire about project progress, channels of subsequent information disclosure.
November 4th 2016	Bus driver of Shijiazhuang Public Bus Company	They suggest obtaining the real time information of the road conditions and public bus routes.
November 9th 2016	Staff of LOTTEMART	They suggest that the demand of travelling at nighttime with public transport be considered.
November 14th 2016	Staff of Agriculture Bank of China in Shijiazhuang (whose hometown is Zhengding County)	They prefer multiple options to commute from Shijiazhuang to Zhengding.
November 14th 2016	Villagers of Zhengding County	They want to know the status of land occupation and demolition of the project.

In addition, the PMO of the Ministry of Housing and Urban-Rural Development emailed the Climate Department of NDRC and China Academy of Building Research on November 14th for their suggestions and recommendations. No comments were received from the Climate Department of NDRC. China Academy of Building Research proposed that, “emergency ventilation” should be taken into consideration if any large-scale traffic hub or similar public buildings are involved in the project, which is not only related to the environment, but more importantly to public safety (anti-terrorism, epidemic diseases control, etc).

After the completion of information disclosure, Ningbo PMO also collected comments of relevant departments through telephone interviews and got the feedbacks as shown in Table 4-3.

Table 4-3 Records of Public Consultation of ESMF by Ningbo PMO

Stakeholders	Feedbacks
Ningbo Urban Construction and Design Institute	Rail transit TOD project is favorable to the intensive utilization of land resources and city sustainable development. Through TOD mode, a multi-functional city node will be established with a variety of business types to be integrated by means of developing underground space and popularizing buildings of high volume rate. It is suggested to expand the coverage ratio of greening space in the TOD functional area, such as energy-efficient buildings and green land of parks.
Ningbo Municipal PMO for Pre-stage Works	TOD mode provides good guidance to develop urban infrastructures and prevents city from disorderly expansion. In the city development plan with public transport orientation, we must attach great importance to the influences on residents’ daily life and synchronization repair of relevant municipal roads and bridges during the construction period.
Ningbo Transport	Great efforts shall be taken to developing city centers and sub-centers which rely

Stakeholders	Feedbacks
Congestion Control Office	on public transport, so as to integrate multiple functions of work, living and entertainment, etc. In this sense, citizens can meet their daily demands with public transport rather than travelling by cars, which will be conducive to reducing traffic congestion. It is suggested to focus on the design of bus transfer and connection under the concept of TOD-mode.
The masses	They are more concerned about the compensation and resettlement around the transportation site, if any; They wonder how to control noise if the residential areas are combined with the transportation sites, whether their normal life will be affected; The construction period of large-scaled civil works last so long that the residents are severely affected in travelling. Therefore, reasonable transport guarantee program should be prepared to solve this problem.

In principle, all PMOs accept the above-mentioned public opinions and will give full considerations during the project implementation stage.

4.2 Public consultation and Communication Plan during Project Implementation

Public consultation shall be conducted during the whole project process. During project implementation stage, the stakeholders, experts, the public, NGO, and relevant departments will be consulted from baseline information collection, project preparation and key milestones (inception report, sub report, interim report, draft for comments and submittal). The comments collected will be compiled to the plan (strategy/ research /policy) and other outputs.

4.2.1 Formats of Public consultation

The public consultation could be conducted in various formats, such as social survey, questionnaire, media press, interview with relevant departments and community, expert consultation, workshop and hearings. In accordance with feedback on the EMF, it is suggested to make use of more popular platforms among the public during the project implementation stage, for example, governmental WeChat, public account of micro-blogging, local mainstream paper media and local government website such as information bulletin board of Longgang District Government, etc.

4.2.2 Targets of Public consultation

The target of public consultation shall include but not limit to government departments relevant to environmental protection, land resources, planning, water resources, urban construction, transportation, tourism, reform and development, and finance, experts on different multidisciplinary and stakeholders.

4.2.3 Contents of Public consultation

The information disclosed to the public mainly include: the background of plan (strategy/research/policy) and main context; the constraints for plan (strategy/research/policy) implementation; the scope and extent of the impacts to regional ecological function, ambient environment quality, environmental sensitive receptors, resources utilization and social-economic environment caused by the plan (strategy/research/policy); the mitigation measures proposed under the plan (strategy/research/policy) and expected effectiveness of the mitigation measures.

4.2.4 Handling of the Public's Feedback

The feedbacks from public consultation shall be sorted by different age groups, gender, education level, occupation and nationality to conclude the main opinions. The comments from directly affected persons shall be listed separately and analyzed. The results of the public consultation shall include but not limit to:

1. The major concerns on environment and proposed mitigation measures;
2. The proportion supportive to the plan (strategy/research/policy) and reasons;
3. The proportion against the plan (strategy/research/policy) and reasons;
4. Requirements and suggestions to the plan (strategy/research/policy);
5. Incorporation of views of public into the final plan (strategy/research/policy).

5. Institutional Capacity Building

The MOHURD PMO is responsible for communicating with the World Bank, providing guidance to the demonstration cities, and implementation on the policy technical assistance projects at national level.

The duties of the local PMO include: i) project planning, supervision and coordination, financial management and promotion; ii) preparation of project budget, implementation program and supervision of daily work; iii) inspection and coordination of project implementation; iv) support of the World Bank missions to ensure the project outputs satisfying with the requirements of project documents and World Bank procedures; v) preparation of annual plan, finance plan and reporting the progress and finance status regularly.

5.1 Environmental Management Capacity Assessment for PMO and EA

World Bank is the executing agency for this GEF China Sustainable Cities Integrated Approach Pilot. The seven pilot cities, including Beijing, Tianjin, Shijiazhuang, Ningbo, Shenzhen, Guiyang and Nanchang, will implement the program jointly with the MOHURD (Ministry of Housing and Urban-rural Development). A central leading group has set up under the MOHURD lead by the deputy minister. The leading group office is located in the division of Building Energy-saving and Technology. The seven pilot cities have established individual program leading groups at each city to be responsible for overall coordination. The project management office (PMO) established under each leading group is responsible for the day-to-day management.

Amongst the pilot cities, the PMOs of Beijing, Tianjin and Ningbo are institutions directly under the Municipal Construction Commission, which have implemented a number of World Bank/ADB projects and GEF grants 7. These PMOs have extensive project experiences and are familiar with requirements and policies of World Bank on procurement and environmental safeguard.

The PMOs of Nanchang and Guiyang are set under the Municipal Development and Reform Commission staffed with officers from relevant departments and out-sourced working staff. The Nanchang PMO includes Municipal Development and Reform Commission, Finance Bureau, Planning Bureau and other relevant departments. Guiyang PMO includes Municipal Development and Reform Commission, Finance Bureau, Transportation Commission, Land Resources Bureau, Housing and Construction Commission, Planning Bureau, Public Security Bureau, Public Transport Group, Rail Transport Company and other relevant departments.

The program activities of Shijiazhuang and Shenzhen will be undertaken in Zhengding New District and Shenzhen International Low Carbon City respectively. Both PMOs of Shijiazhuang and Shenzhen have limited experiences on World Bank project. Consulting firms have been contracted to support the preparation.

The leading departments, institutional arrangement, roles and responsibilities and relevant experiences on environmental management are presented in Table 5-1.

Table 5-1 List of Environmental Management Capacity of each PMO

No.	PMO	Leading Departments	Institutional setup of PMO	Assigned staff on environ	World Bank related experiences	Valuation of the PMO's Capacity
1	CPMO	MoHURD	Construction Energy conservation and scientific division, international department, MOHURD	Yes	Have taken WB/GEF "Urban construction energy conservation and renewable resources application project", familiar with the WB guidelines and safeguard policies.	Acceptable
2	Beijing	Municipal Construction Commission	Relevant municipal departments	No	Have taken many WB projects and familiar with WB guidelines and safeguard policies.	Acceptable
3	Tianjin	Municipal Construction Commission	WB PMO of Tianjin Construction Commission (Investment and Appraisal Center of Tianjin Municipal Public and Integrated Transport Construction Project) is the standing agency under Tianjin construction commission	Yes	Have taken many WB projects and familiar with WB guidelines and safeguard policies.	Acceptable
4	Shijiazhuang	Zhengding New District	PMO is consisted by the divisions of finance, construction, civil affairs, planning, urban management, economy development, national resources, environment protection, etc.	No	Have taken many WB projects and familiar with WB guidelines and safeguard policies.	Acceptable, need to be enhanced
5	Ningbo		Construction commission, municipal financial bureau, planning bureau, land resources bureau, urban management bureau, environmental protection bureau, public security bureau, transport commission, government of Haishu District, etc.	No	Ningbo urban construction WB PMO has taken "Zhejiang Duocheng Development Project Ningbo Urban Infrastructure Subcomponent, ", "Zhejiang Urban Construction and Environment Protection Project Ningbo Subcomponent" and "China urban construction energy conservation and renewable energy project Ningbo subcomponent", totally three urban construction project. The PMO is very familiar with WB guidelines and management	Acceptable

No.	PMO	Leading Departments	Institutional setup of PMO	Assigned staff on environ	World Bank related experiences	Valuation of the PMO's Capacity
					procedures.	
6	Nanchang	Municipal Development and Reform Commission	DRC, financial bureau, planning bureau, etc.	No	Overseas economic cooperation division of Nanchang DRC is responsible for the application of WB, ADB and foreign government-funded projects, approval of FSR and FCUP, relevant management works; Many WB and ADB projects have been applied successfully; The Metro Line 2 WB loaned project, applied by Nanchang, has taken the mode of "Metro+Society" to integrate public transport.	Acceptable, need to be enhanced
7	Guiyang		DRC, transport commission, financial bureau, land resources bureau, construction bureau, planning bureau, public security transport management bureau, public transport group, urban rail transit corporation	No	With WB project experience, familiar with WB guidelines and safeguard policies.	Acceptable
8	Shenzhen	Municipal Development and Reform Commission	The leading group of Shenzhen international low-carbon city plan would act as the PLG of GEF project. The PMO will outsource the service by entrusting Greening and Low-carbon Development Promotion Center to assume the project management works.	Yes	No experience of WB projects, but Shenzhen DRC has outsourced the service by entrusting a technical support agency, Greening and Low-carbon Development Promotion Center. The agency has abundant experience of international cooperation project and is experienced in low-carbon urban development projects. At the project preparation stage, it has mobilized highly-educated talents for the project.	Acceptable

5.2 Recommendations to Strengthening Environmental Management Capacity

According to the results of institutional capacity assessment, each PMO shall appoint one dedicate staff responsible for environmental management during implementation. He/she will be the contact person with environmental officer of World Bank and responsible for internal communication and coordination on environment management.

In addition, three approaches are proposed for capacity building. Each PMO could choose one or more approach to strength its capacity.

(1) Hiring full time staff with environmental management capacity and relevant background through counterpart funds or GEF-grant funds.

(2) Hiring external environmental specialist through GEF grant funds to provide consulting services and technical supports for project implementation.

(3) Contracting consulting firm through GEF grant funds. The environmental expert could draft the terms of references for the chapters on strategy EIA and technical support on environmental safeguards as necessary.

(4) Organizing trainings on environment for each PMO in the capacity building component.

Table 5-2 Capacity Building Plan

No.	PMO	Plan A Hiring more full-time staff	Plan B Hiring individual external expert	Plan C Hiring consulting firm
1	MoHURD		√	
2	Beijing			√
3	Tianjin		√	
4	Shijiazhuang		√	
5	Ningbo		√	
6	Nanchang		√	
7	Guiyang		√	
8	Shenzhen	√		

Annex 1: Terms of Reference for Strategic Environmental Assessment (SEA)

The project activities reflect the TOD-oriented development strategy, planning and study of plans, mechanism and policy-makings, etc. Given the requirements of Regulations of Planned Environment Impact Assessment (see Section 1.2.2 for details), the above-mentioned activities will neither trigger binding obligations of environment impacts assessment as specified by "land, watershed, sea and region" in the Regulation nor Special Planning for Ten Industries. However, in accordance with the requirements of WB environment policies, these TA activities must carry out SEA to incorporate environmental factors into decision-making procedures. Therefore, the following procedures and requirements will be appropriate.

For activities 2, 3, 5.2 in Table 3.1, it is requested to analysis the potential environmental and resource impacts and incorporate environmental factors such as environmental carrying capacity and environment volume into TA activities and outcomes during the implementation stage. Such analysis can also follow the SEA requirements but in a simplified manner.

I. Objective of SEA

SEA is a systematic process which centers on impacts assessment of policies, plans and planning. The objective is to ensure the environmental impacts will be taken into consideration and settled at the early stage of decision-making just like social and economic factors. The final target is to support decision-making, not only analyzing the advantages and drawbacks of policies, plans and alternatives from the perspective of environment, but also evaluating various options comprehensively based on their economic and social benefits.

I. SEA procedures and requirements

Strategic Environmental Assessment (SEA) is a structured and rigorous EIA-based process, by using multi-disciplinary theories and methods (both qualitative and quantitative methods), combining experience-based judgment and quantity analysis. This SEA is implemented in 10 steps:

(1) SEA consultant team and develop SEA work plan.

SEA is a complicated and systematic project, so a work team shall be established ahead of time, which will deal with the coordination, management and other SEA related affairs and develop the SEA work plan. The work team must include members from the department who develops the policies, plans or planning, the EIA audit organ, and the evaluation agency.

SEA work plan must include but not limited to target, schedule, budget, staffing input plan, public consultation plan and the potential cooperation institutions and agencies.

(2) Define the establishment of indicator system of SEA

The establishment of indicator system is the core task of SEA. Indicator system is not only the outcome of studying policies, plans and planning and status quo survey, but also the basis of forecast and evaluation. Additionally, it is also the important reference for improving SEA policies, plans, topic researches and practices. A clear understanding of the assessment target is the first step of SEA and will facilitate the identification and evaluation of the potential environmental problems resulting from the proposed policy. To better determine the potential environmental impacts of the policy proposal, we also need to know the relationship between the policy proposal and other policies so as to understand the backgrounds and limitations for

the policy proposal.

(3) Select and confirm the alternative schemes of the policy proposal

The alternative schemes refer to all possible schemes that have the same goal as the policy proposal. The essence of SEA is to obtain the best scheme by evaluating and comparing all the policies, plans, topic researches and alternative schemes. So, the selection and confirmation of alternative schemes is very important for SEA.

(4) Determine the major environmental impacts and demarcate the spatial range of SEA

Determination of major environmental impacts and demarcation of spatial range of SEA shall be based on the level, category, and implementing organs and areas of the policy proposal. When determining the major environmental impact by policies, plans, topic researches, the list of environmental impacts and the matrix (including list of policy-related activities) in the EIA may be referred to. Rules are not available for the demarcation of the spatial range. Generally, the spatial range of SEA for important state-level policies is determined by laws, and that for other lower level policies may be determined by the departments through consultation that may be affected by the policy.

(5) Investigate environmental background and create database

The understanding of the environmental background is the basis of predicting the potential environmental impacts and provides basic data for the SEA. In general, the new policy is the continuation of existing policies, so the environmental monitoring data of the existing policies will help to predict the potential environmental impacts of the proposed policy. Through survey and assessment, the endowment and utilization status of main resources in the range of assessment will be acquired, to assess the ecological status, environmental quality and living conditions. In principle of highlighting the key points and combining specific with general matters, we will choose the specific content that reflects SEA features and regional environmental targets.

(6) Predict and analyze the environmental impacts of the proposed policy

The SEA for policies focuses on the macro and meso environmental impacts of the proposed policy, so the prediction methods used must provide large-range and long-term information, such as satellite remote sensing, aerial photography, mapping technology, computer simulation, fuzzy logic inference, grey system prediction. In addition, national or regional development plans, such as predication data of population, energy utilization and traffic, may be used. The methods used must guarantee the multi-factors and long-term prediction.

Transit oriented urban development planning strategy studies mainly include the investigation and diagnosis of current TOD conditions of the demonstration cities, the development planning, strategy or design guidelines integrating the local land utilization and traffic planning put forward on the basis of TOD idea, and indirect, consequential and cumulative environmental impacts caused by economic development of the regions along rail transit line, especially the regional environmental capacity, water resources and energy conditions. Combining with the pollutants discharge conditions within the region, the major potential environmental impacts of various environmental elements are analyzed include but not limit as follows:

Objectives	Environmental elements	Assessment indicator
Traffic environment resources bearing-capacity	Land resources	Area of land occupied by urban rail transit network and the auxiliary facilities Type of land occupied by urban rail transit network

Objectives	Environmental elements	Assessment indicator
		and the auxiliary facilities Impacts on the land utilization pattern
	Water resources	Impacts on drinking water sources (if involved) Water consumption of the supporting facilities Impacts on drainage or blocking of the ground water
	Energy	Proportion of power consumption during the operation period to total power consumption of the public transport Fuel consumption during the operation period to total fuel consumption of the public transport Per GDP energy consumption
	Ecological environment	Distance and length of the interface between the urban rail transit project and facilities and the ecological sensitive areas or the length that the urban rail transit project and facilities pass through the ecological sensitive areas
	Noise and vibration	Distance for protection against and control on vibration Conditions of roadbed Types and quantities of the construction machines Running frequency and speed of the locomotive
	Electromagnetism	Impacts of radio interference of the overhead line of the rail transit on TV signal receiving (SNR) Power frequency electric field intensity and magnetic field intensity of the main substation
	Water	Construction schedule of the supporting sewage treatment facilities at the station, car depot, parking lots and comprehensive bases and the sewage treatment method Relationship between the underground construction miles and the hydro-geological conditions (water sources and recharge area)
	Air	Distance for controlling the smell in air pavilion Impacts on GDP growth (the ratio between GDP growth and investment on urban rail transit) Per GDP CO_2 emission
	Economic development	Impacts on the industrial structure Jobs created by unit increase of investment Impacts on consumption mode of the public
Traffic environment economic bearing-capacity	Logistics	Freight volume and the proportion of freight volume to the freight volume of public transport Passenger capacity and the proportion of passenger capacity to the passenger capacity of public transport Degree of connection with other transport methods Total GDP
Traffic environment psychological bearing-capacity	Landscape aesthetics	Visual intrusion and aesthetical impacts
	Road traffic	Impacts of travelling mode of the public
	Demolition and resettlement	Area of the demolished structures and the displaced population
	Social acceptance	Satisfaction of the public towards environmental protection of urban rail transit project

(7) Comprehensive assessment of the environmental impacts

After completing the prediction and assessment of the impacts on various environmental elements, we need to have a comprehensive assessment over the environmental impacts. Here is the specific method: first consider the interactions between various environmental elements and the interaction mode and intensity, and then use the variable weight theory to get a dynamic assessment of overall environmental impacts, featured with uncertainty and long term, which is the difference between SEA and EIA.

(8) Carry out economic analysis of environmental impacts and set the sequence of

alternative schemes

The final purpose of the SEA for policies is to help make decisions, so the alternative schemes shall be compared and evaluated by considering not only the environmental impacts but also the economic and social benefits. The environmental impacts of polices are usually represented by the indexes with or without a physical measurement unit, but the social and economic impacts are usually measured by currency. This requires transforming the environmental impact indexes to the form of currency, mainly by environmental economics methods, such as value preference survey method, travel cost method, shadow engineering method, production function method, etc.

After that, the cost-benefit analysis or weighting scores method may be used to comprehensively evaluate the cost and benefit of the alternative schemes, so as to determine the sequence of alternative schemes according to the efficiency.

(9) Give suggestions and environmental protection measures

The suggestions shall contain the best scheme, the framework for follow-up EIA and the environmental protection measures. In the implementation of the policy, measures shall be taken to prevent major environmental risk.

(10) Monitoring feedback and follow-up evaluation

In order to evaluate the implementation effects of the policy and decide whether it is necessary to adjust the policy during its implementation process, the implementation process will be monitored and feedbacks will be returned. Specific evaluations may be conducted based on the feedbacks to facilitate the implementation of the policy. Experiences will be accumulated to improve the SEA for policies in future.

II. SEA content

Based on the characteristics of SEA and by reference to the technical requirements of EIA, the detailed format and content of SEA report are: 1) To analyze, predict and evaluate the potential environmental impacts, including analysis of environmental bearing capacity, resources, adverse environmental impacts prediction, environmental coordination with relevant plans; 2) To prevent or mitigate the adverse environmental impacts, including policies, administrative or technical measures for the prevention or mitigation of adverse environmental impacts; 3) To study the environmental reasonability and feasibility of policies, plans and draft reports, the reasonability and effectiveness of the measures of preventing or mitigating the adverse environmental impacts as well as suggestions on adjustment to the planning draft.

Specifically, SEA report includes 12 chapters: Preface, introduction, policy analysis, description of current environmental conditions of the assessment area, identification of environmental impacts and establishment of index system, prediction of strategic environment impacts, mitigation measures, analysis of alternative schemes, comprehensive assessment, public consultation, follow-up EIA, conclusion and annexes.

(1) Preface

This part briefly introduces the characteristics of the proposed policy, the EIA process, major environmental problems, and the conclusions of environmental impact report.

(2) Introduction

This part mainly introduces the assessment rules and plan, including the purpose and basis of the report, the assessment scope, and the assessment standards, methods and procedures.

SEA purpose: to identify the main factors restricting policy implementation (such as resources, environment etc.), analyze, predict and assess the overall potential effects resulting from policy implementation and the long-term impacts on environment and human health, evaluate the feasibility of the policy from the perspective of environmental protection, raise suggestions for policy improvement and adjustment, develop environmental protection measures and follow-up EIA plan, maintain the harmony among economic, social and environmental benefits and between long-term and short-term benefits, and provide basis for decision-making and environmental management.

SEA basis: Regulations, policies and technical guidelines related to SEA for Policies.

SEA scope: The SEA scope is determined according to the space scale which may be influenced by implementation of the SEA for Policies.

SEA standard: Environmental protection standard related to SEA for policies, including the current environment policies, regulations and quality standard, standard of environmental carrying capacity and standard of sustainability principle.

SEA method: Methods used for influences prediction and assessment corresponding to the policy level. In the practices, frequently used methods and means in EIA can be used according to the actual situation and other proved mature technology can also be used.

SEA procedures: Instruction procedures of SEA for policies and prepare the report around the procedures.

(3) Policy analysis

It includes the policies overview, analysis of coordination and uncertainty of policies, analysis of the policies and formulation process of policies and analysis of the relationship between the proposed policies and other relevant development policies, planning and plans.

Implement analysis and preliminary assessment on policies from the perspective of environmental impact assessment, select the alternative policy scheme from multiple policies schemes and view it as the object of environmental impact analysis, prediction and assessment.

(4) Description of current environmental conditions of the assessment area

The assessment area includes the area where the policies are implemented and other policies-affected areas. The environmental conditions of the assessment area include the environmental conditions before, during and after the policy implementation.

It mainly analyzes the natural environment (geographic position, terrain, landform, geology, climate, meteorological and hydrological conditions, environmental quality and natural resources and so on), the social environment (population, industry structure, industry layout, resource development, economy and trade, education, science and technology, culture and political system) and living environment (public facilities, welfare, aesthetic value, cultural heritages, sense of security and satisfaction, health and so on)

It includes investigating and analyzing the current environmental conditions and historical development and identifying the sensitive environmental issues and main factors restricting the proposed policies.

(5) Identification of environmental impacts

Identify resources and environmental elements which may be affected by the policy implementation, the resources consumption (or occupancy of resources) of the policy implementation and nature, scope and degree of environmental impact. Set up the relationship

between the policy scheme and resources and environmental elements, initially determine the scope and degree of the influences and decide the focus of assessment. And at the end, set up assessment index system in accordance with the environmental objectives, the results of baseline survey and assessment and the assessment focus.

The focus of environmental assessment identification should be analyzing the adverse impacts of the policy implementation on resources and environmental elements, including direct impacts, indirect impacts, short-term impacts, long-term impacts and various possible regional, comprehensive and cumulative environmental impacts or risks. The resources factors which should be considered include but not limited to land resources, water resources and biological resources and so on; and the environmental elements which should be considered include water environment, atmospheric environment, soil environment, acoustic environment and ecological environment.

(6) Establishment of index system

The assessment indexes are used to assess the environmental feasibility for policies and quantify and assess the environmental objects usually from the aspects of environmental quality, ecological protection, sustainable use of resources, social environment and environmental economy and so on. Value of the assessment indexes should be determined in accordance with the relevant environmental protection policies, regulations and standards. As to indexes that could not be quantified, semi-quantitative index value or qualitative description of the indexes upon argumentation of the experts should be provided.

(7) Prediction of strategic environmental impacts

It includes prediction on social-economic activities and environmental effect caused by the policies.

Systemically analyze the degree and scope of impacts of the policy implementation on the resources and environmental elements, quantitatively predict the impacts of the policy scheme on the determined assessment focus (resources and environmental elements under big and extensive influences of the policies) and the specific assessment indexes, and conclude the overall impact of the policy implementation in the assessment area and the cumulative environmental effect. Analyze the resources and environmental carrying capacity of the area before the policy implementation and assess the stress exerted by the policy implementation on the regional resources and environment by combining with the prediction results.

The prediction on environmental impact is usually carried out by the environmental elements, such as, biodiversity, health, water, air, soil, animals, plants, mineral resources, cultural heritages and natural landscapes and so on.

(8) Mitigation measures

Measures to mitigate the environmental impacts refer to the policy, management or technical measures to mitigate the adverse impacts exerted by implementation of the EIA-recommended policy scheme after assessment on the protective measures of ecology environment as specified in the policies. These measures are taken to remedy or cover the shortcomings of the policies. And prediction, analysis and assessment of the amended policies are carried out.

(9) Analysis of alternative schemes

Suggestions on optimization and adjustment of the policy factors and the alternative schemes are put forward in accordance with the analysis and assessment result of the policy. Analyze the merits and demerits of the alternative schemes from the aspect of environment so as to clearly determine whether the alternative schemes have the same objectives and benefits as the

proposed policies.

The suggestions on optimization and adjustment should be comprehensive, specific and operable. The adjustment suggestions on planning scale should clearly define the planning scale after adjustment and consider the resources and environmental carrying capacity after the implementation.

Summarize the prediction, analysis and assessment results of impacts on various resources and environmental elements and discuss reasonability of objectives, scale, layout and structures of the policies and whether the environmental objectives are achievable or not. And then discuss the impacts of the policies on sustainable development of the assessment area.

Prioritize the original policy schemes, the policy scheme adjusted after analysis of the environmental impacts and the mitigation measures are put forward and the alternative schemes by benefit ratio, net benefit or effects.

(10) Public consultation

Opinions on this SEA from the relevant units, experts and the public on the policies which may exert adverse impacts on the environment and will directly influence the environmental rights and interests of the public should be solicited in a accessible way to the public, at the commencement stage of SEA, drafting and finalization of report and throughout the whole process. Review the alternative scheme to the extent that the scheme can be disclosed, reasonably choose the participants, the method and timing of public consultation and grasp the public's opinions and suggestions on the policy scheme.

(11) Follow-up EIA

As to policies which may exert major environmental impacts, the follow-up assessment scheme containing the specific requirements should be formulated when preparing the environmental impact assessment documents so as to guide the implementation of the follow-up assessment. Data and information obtained in the follow-up assessment and the assessment results should be able to provide reference for adjustment of the policies.

(12) Conclusion and annexes

In the conclusion, the final suggestions and opinions are put forward. Namely, if this policy scheme is acceptable, then the policy scheme continues; or the policy scheme is amended or the remediation is formulated; or one or multiple alternative schemes are acceptable; or the policy is refused or terminated. Then feed the conclusion back to the decision-maker and at the end, the policies are formulated and implemented.

IV. Requirement on the qualifications of consulting company

The EIA consulting company or individual specialist must be experienced in political EIA, SEA and be aware of the safeguard policies of WB; Complete the tasks as specified in TOR and be capable of handling key environmental issues which occur during project implementation.