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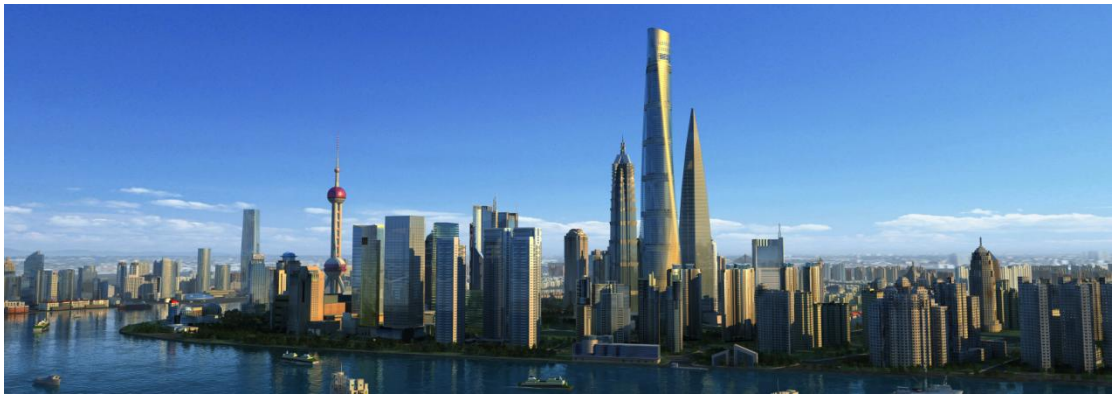
Urban Financing and Innovation Project

Environmental and Social Management Framework
（ESMF）



Shanghai Green Urban Financing and Services Co., Ltd.

January 2019

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Abbreviations

AH	Affected Household
AP	Affected Person
ARAP	Abbreviated Resettlement Action Plan
CEAM	Shanghai Chengtou Environment Asset Management Co., Ltd.
CPIC	China Pacific Insurance (Group) Co., Ltd.
DFV	District Financing Vehicle
EDF	Environmental Development Fund
EMDP	Ethnic Minority Development Plan
ESMF	Environmental and Social Management Framework
FGD	Focus Group Discussion
FSC	Shanghai Green Urban Financing and Services Co., Ltd.
GAP	Gender Action Plan
HD	House Demolition
IPPF	Indigenous Peoples Policy Framework
LA	Land Acquisition
LLC	Limited Liability Company
M&E	Monitoring and evaluation
MOF	Ministry of Finance
NDRC	National Development and Reform Commission
OP	Operational Policy
PMO	Project Management Office
PRC	People's Republic of China
RAP	Resettlement Action Plan
RPF	Resettlement Policy Framework
SA	Social Assessment
SAP	Social Action Plan
SFB	Shanghai Finance Bureau
SHCT	Shanghai Chengtou Group Corporation
SHDRC	Shanghai Development and Reform Commission
SMG	Shanghai Municipal Government
SMP	Social Management Plan
SMPF	Social Management Policy Framework
TORs	Terms of Reference
WBFI	World Bank Financial Intermediary

Units

Currency unit	=	Yuan (CNY)
1.00 yuan	=	$0.15
1 hectare	=	15 mu

1. Background information and the introduction of the project

1.1 Background of Urban Financing and Innovation Project

In 2015, Shanghai Development and Reform Commission (**SHDRC**) and Shanghai Finance Bureau (**SFB**), in conjunction with Shanghai Chengtou Group Corporation (hereinafter referred to as "**Shanghai Chengtou**") proposed to the National Development and Reform Commission (**NDRC**) and the Ministry of Finance (**MOF**) to apply for the World Bank Financial Intermediary (**FI**) loan to support Shanghai to establish an Environmental Development Fund (hereinafter referred to as "**EDF**"). It is proposed to transform the District Financing Vehicle (hereinafter referred to as "**DFV**") established in the Shanghai Urban Environment APL World Bank-financed Project into a full-fledged infrastructure financial intermediary in China.

In February 2018, according to the Notice of preparation work for the new round, WB and ADB financed projects and the projects listed in the lending program for 2018-2020（No. 290, 2018, NDRC&MOF）, this "**Green Urban Financing, and Innovation Project**" (hereinafter referred to as "**the Project**") was listed in the World Bank loan 2018-2020 alternative project planning list. For the smooth start of the project implementation, Shanghai Chengtou and Pacific Asset Management Co., Ltd. will totally make a total equity investment of RMB 2 billion, with the shareholders of 75% and 25% respectively. Therefore, Shanghai Chengtou has set up **Shanghai Green Urban Financing and Services Co., Ltd.** (hereinafter referred to as "**FSC**") with **Pacific Asset Management Co., Ltd.** on December 6th, 2018. FSC is the implementation entity of the project to manage the WB/ KfW loan.

The FSC will focus on the green environmental protection field, adhere to the investment concept of combining marketed-based projects and public utilities, provide a "**Capitals + Services**" package solution for environmental protection enterprises and sub-projects to build an integrated financial service company that combines "**Industry, Financing, and Investment**". It will strive to become an innovative green financial intermediary with international benchmarking and domestic leading,

advocating Green concept and creating market leading and demonstration effects.

The amount of the co-financing loan of the project is about 520 million US dollars, including 200 million US dollars from WB, 150 million Euros from KfW and RMB 1 billion Yuan from FSC itself. FSC will on-lend WB/KfW loans and own counterpart funds to sub-borrowers through entrusted commercial banks. The repayment period of the loan from WB is 28 years and the grace period is 8 years while the repayment period of the loan from KfW is 15 years and the grace period is 5 years.

1.2 Introduction of FSC

1.2.1 Business Structure of the FSC

In the **Urban Financing and Innovation Project**, the FSC will use the WB/KfW loan, to build an innovative "**FSC + EDF**" business structure, and the "**Limited Liability Company (LLC) + Limited Partnership (LP) fund**" organization form. The FSC will fully leverage the WB/KfW Loan to attract more equity capitals and external financing capitals from the market, and implement the specialized portfolio investment, especially for providing a package of solutions of equity investment, debt investment, project management, financial management and technical assistance for eco-friendly enterprises/sub-projects, to achieve long-term, stable, sustainable and replicated investment operations.

The business structure of the FSC is illustrated in the diagram below (Figure 1-1).

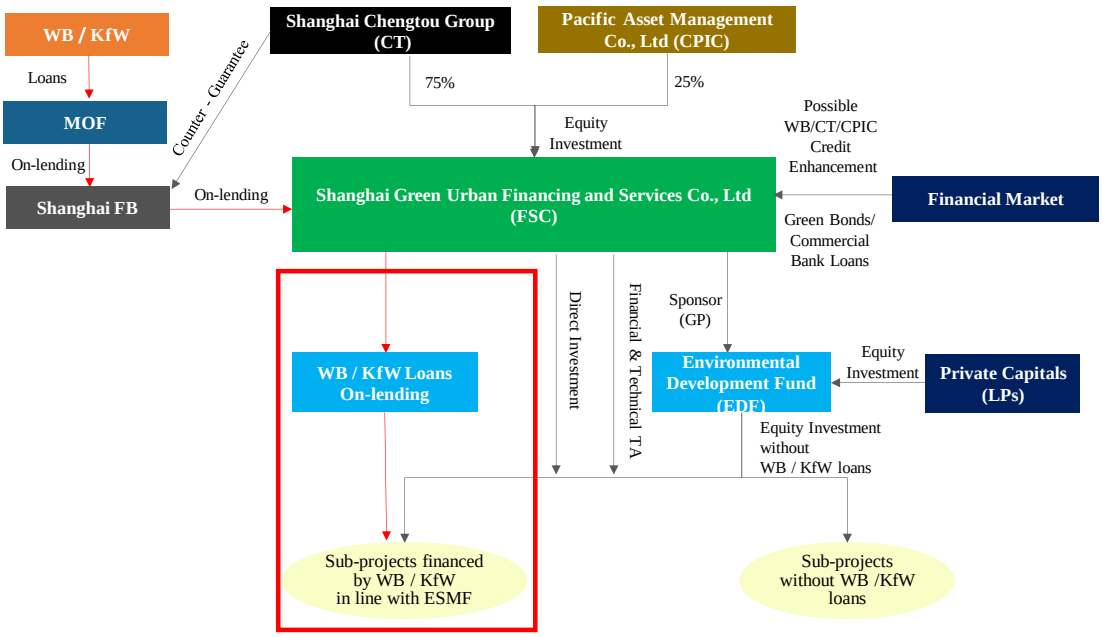

Figure 1-1 The Business Structure of the FSC

Shanghai Chengtou and Pacific Asset Management Co., Ltd. will totally make a total equity investment of RMB 2 billion to set up the FSC, with the shareholders of 75% and 25% respectively. The WB and KfW co-financing loan will be on-lent to the FSC through MOF and Shanghai FB, with the estimated WB loan of USD 200 million and KfW loan of EUR 150 million. FSC will use its own capitals to do equity investment firstly, and then to set up EDF in the next step, attracting the equity investment from financial institutions, listed companies, specific investment institutions as partners. In addition, FSC will raise funds by issuing green bonds and borrowing from commercial banks from domestic financial markets.

In this business structure, we can clearly distinguish the capital resources between the WB/KfW loan and other capitals for the investment in the enterprises / sub-projects. The sub-projects supported by the WB/KfW loan will be implemented in accordance with this ESMF to meet domestic and related security policy requirements of the international financial organizations such as WB and KfW. The capital sources of EDF won't include the WB/KfW loan, however, EDF can also invest the sub-projects financed by the WB/KfW loan. In this kind of situation, we agree to follow the policies described in the ESMF. EDF's investment for the sub-projects without WB/KfW loan will follow local safeguard system. In terms of capital management, the FSC will

manage the WB/KfW loan financing support project by means of sub-ledger management, and a designated account will be set up to manage the WB/KfW loan. The FSC will set up the International Business Department, which will be responsible for managing the investment, safeguard review and monitoring, disbursement and repayment of the WB/KfW loan. The sub-project implementation units ("sub-borrowers") will be urged to use the WB/KfW loan in accordance with the relevant requirements of MOF, Shanghai Finance Bureau, the World Bank and KfW.

1） The FSC would on-lend the WB/KfW loan to mainly sub-projects of water supply, wastewater, and solid waste field, realizing the portfolio investment combined with equity capitals, EDF capitals, and other funds raised through the issuing the green bonds. There will be some other sub-projects financed without WB/KfW loan .

2） The FSC would mainly on-lend the WB/KfW loan to environmental enterprises / sub-projects through entrusted commercial banks in the initial phase. 1) WB/KfW entrusted loans would have a 15-year tenor; 2) FSC entrusted loans have 10-15 years (innovation with longer tenor) with the right to seek WB approval to reduce the loan tenor to 8 years for small and medium projects or enterprises.

3） As the general partnership, the FSC will set up the Environmental Development Fund (EDF) by introducing the social capitals as limited partners. Considering the requirements of investors and the financing needs of sub-projects, the investment period of EDF will be normally 5-7 years. The EDF will continue to set up a new fund for the investment in the other sub-projects when the current round fund expires.

4） The World Bank plans to provide FSC with a credit enhancement loan () to address the potential problems of non-performing loans or liquidity gaps in FSC in the near future.

1.2.2 Organizational Structure of the FSC

1）FSC's Department and Staff Settings in Initial and Mid-term Stages

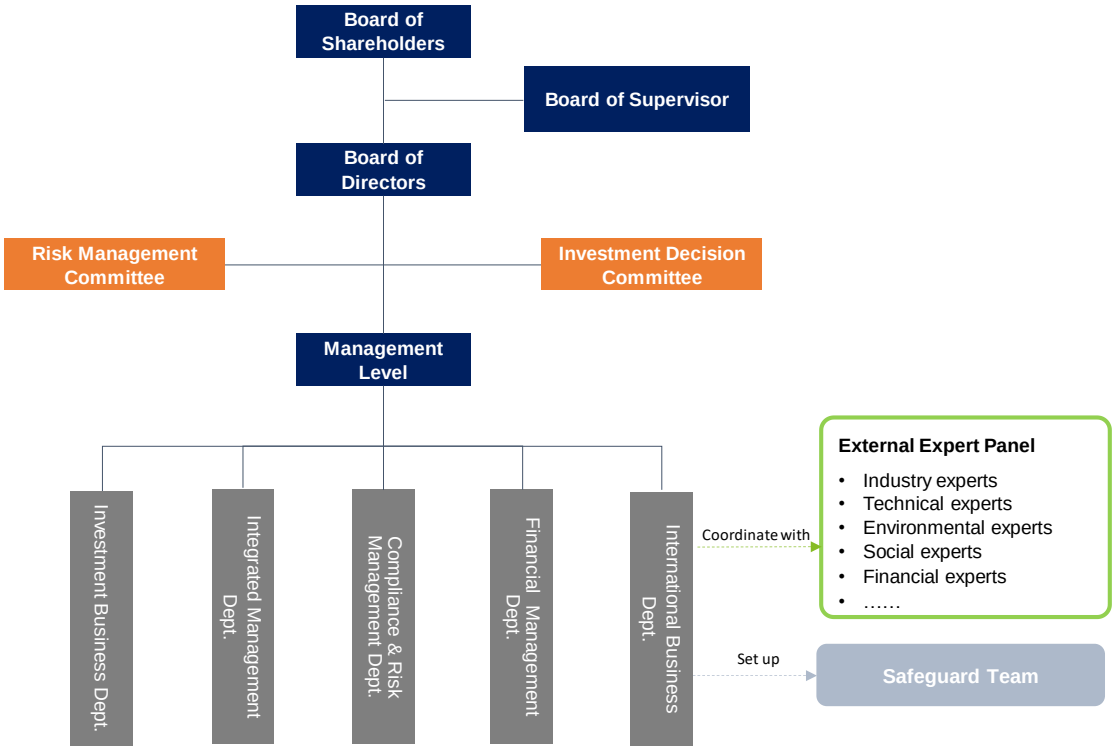

Figure 1-2 The Organizational Structure of the FSC (Initial and Medium-term)

Table 1-1 Number of Employees in each department of the FSC (Initial and Mid-term)

Number of employees in each department in initial and medium term stages			
Department	**Initial stage (By 2025)**	**Mid-term stage (By 2025)**	**Basic job requirements**
Management level	3	3	• Rich management experience • Familiar with national economic, financial, industrial and other policy requirements • Relevant professional background
International business Dept.	4	8	• Work experience with certain international business • Familiar with relevant policies and regulations of the World Bank or other international financial institutions • Proficiency in English application skills and business-related expertise
Investment business Dept.	4	8	• Work experience with direct investment, fund business and other aspects • Familiar with national laws, regulations and policies regarding investment • Professional background in economics, finance or related industries
Financial management Dept.	2	3	• Work experience with legal, internal audit, and risk control • Proficiency in the company's internal risk management related systems and processes • Professional backgrounds in law and finance
Compliance & Risk management Dept.	2	5	• Work experience with financial management, accounting and other aspects • Familiar with the national accounting system and standards, proficiency in the company's internal risk management related systems and processes • Professional backgrounds in economics and finance
Integrated management Dept.	3	3	• Work experience with administrative, personnel and other aspects • Strong organizational and communication skills • Professional background in human resources, administration, information technology, etc.
Total	**18**	**30**	

2）FSC's Department and Staff Settings in Long-term Stage

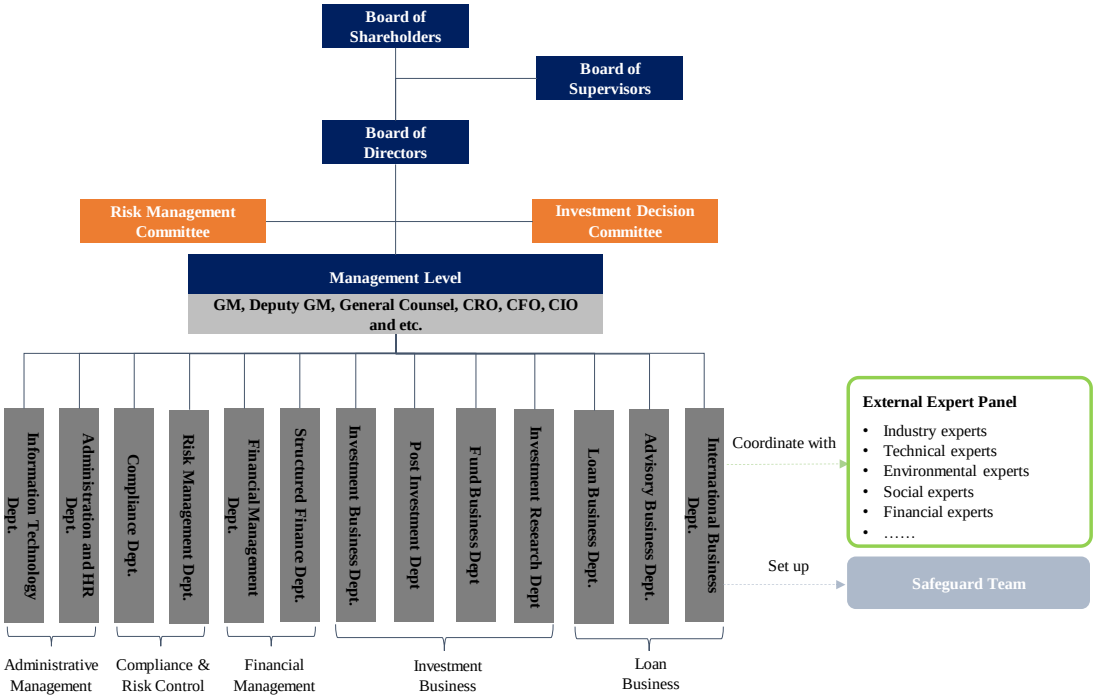

Figure 1-3 The Organizational Structure of the FSC (Long-term)

Table 1-2 Number of Employees in each department of the FSC (Long-term)

Number of employees in each department in the long-term stage			
Department		**Long-term stage (After 2026)**	**Basic job requirements**
Administrative Management	**Management level**	3	• Rich management experience, familiar with national economic, financial, industrial and other policy requirements, relevant professional background
Integrated management	**Information and technology Dept.**	1	• Work experience with information technology, familiar with relevant standards and requirements for investment institution information system construction, professional background of computer and information technology
	Administration and HR Dept.	2	• Work experience with administrative, personnel and other aspects, strong organizational and communication skills, professional background in human resources, administration, information technology, etc.
Compliance & Risk management	**Compliance Dept.**	3	• Work experience with legal compliance, proficiency in the company's internal risk management related systems and processes, professional backgrounds in law
	Risk management Dept.	3	• Work experience with internal audit, and risk control, proficiency in the company's internal risk management related systems and processes, professional backgrounds in relevant aspects
Financial management	**Financial management Dept.**	3	• Work experience with financial management, accounting and other aspects, familiar with the national accounting system and standards, proficiency in the company's internal financial management systems and processes, professional background in economics, finance, etc.
	Structural finance Dept.	4	• Work experience with financing business familiar with the design of financing programs, liquidity management, etc, professional backgrounds in economics and finance
Investment business	**Investment research Dept.**	3	• Work experience with investment research, familiar with the basic process of financial research work and report writing; with background in economic, financial or related industry expertise
	Investment business Dept.	5	• Work experience with direct investment, fund business, etc. familiar with national laws, regulations and policies on investment, professional background in economics, finance or related industries
	Post investment Dept.	4	• Work experience with post-investment management, familiar with the post-investment management operation process of investment projects, professional background in economics, finance or related industries
	Fund business Dept.	3	• Work experience with fund business management, familiar with the fund management operation process of investment projects, professional background in economics, finance or related industries
Loan business	**International business Dept.**	8	• Work experience with certain international business, familiar with relevant policies and regulations of the World Bank or other international financial institutions, proficiency in English application skills and business-related expertise
	Loan business Dept.	2	• Work experience with loan review, familiar with the relevant requirements and processes of commercial bank loan business, professional backgrounds in economy and finance
	Advisory service Dept.	2	• Work experience with consulting business, strong organizational coordination and communication skills
Total		**46**	

1.2.3 Primary areas of investment

Considering the shareholders' advantage, the market and social benefits of the invested sub-projects, the primary areas of investment in the early stage will include

water treatment, waste management, and soil remediation, with environmental pollution control and energy saving in the pipeline. As FSC matures, the investment will also touch on other areas like environmental pollution control and new-type urbanization. The preliminary plan is to invest five to ten projects within the first three years after the FSC is established, i.e. 2019 through 2021. The goal of this project is to provide sustainable and long-term financing to the development and operation of ecological infrastructure projects and urban development projects in Shanghai and a number of cities located in the Yangtze River Delta.

1.2.4 Geographic locations of sub-projects

In the initial and mid-term stage, the investment of the sub-projects by FSC will mainly focus on the cities and towns in the Yangtze River Delta Region, including Shanghai Municipality, Jiangsu Province and Zhejiang Provinces.

In the long term, it will gradually consider several kinds of ecological and environmental protection and new urbanization development projects across the country.

1.2.5 Types of Investment

FSC will provide innovative “funding + service” financial intermediary comprehensive services, focusing on four major business types: direct investment, on-lending of WB/KfW loans, equity fund investment and consulting services.

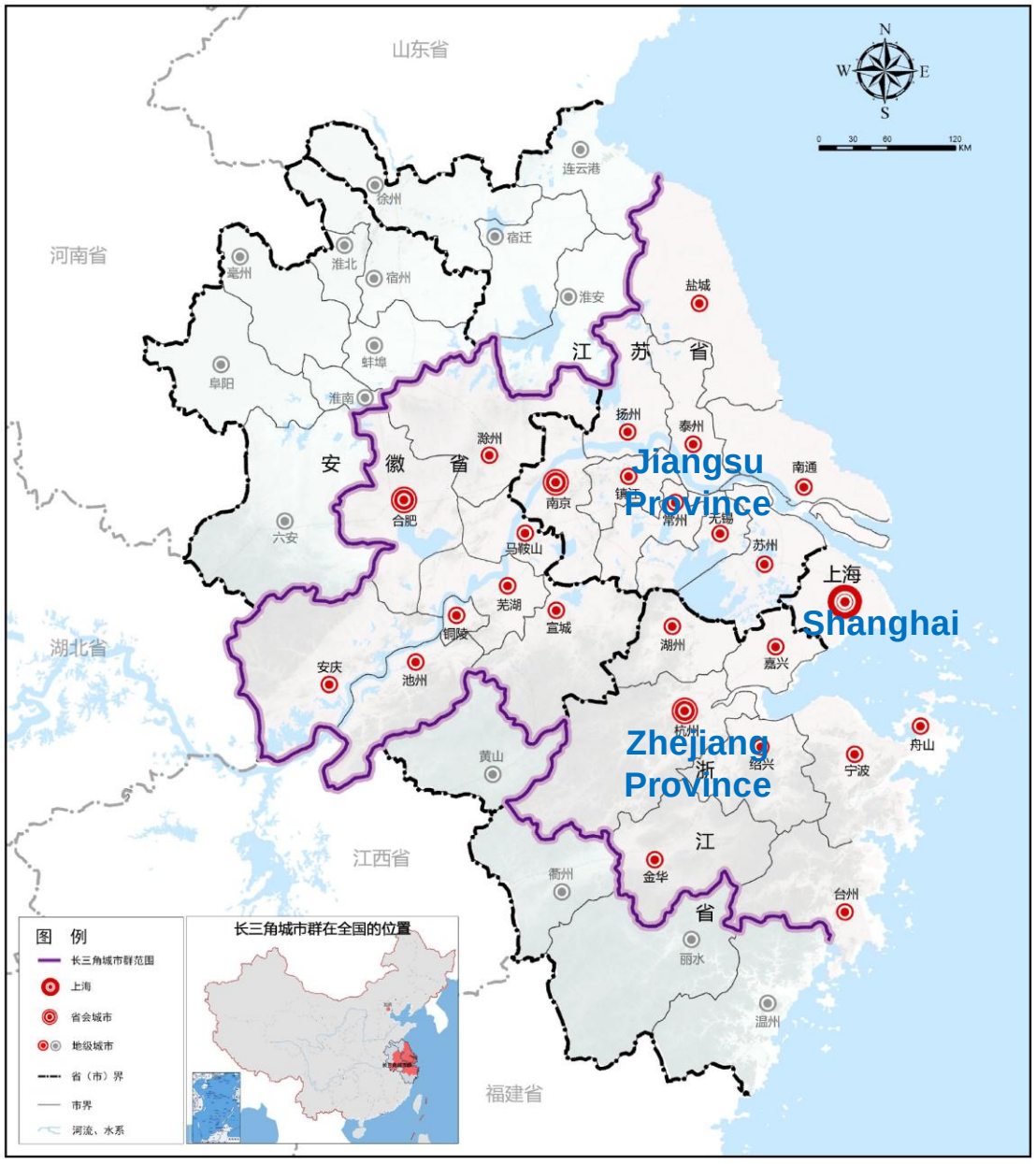

Figure1-4 The Geographical Locations of The Cities in Yangtze River Delta

1.3 Operation experience of DFV

DFV originated from the first phase of negotiation process of the Shanghai Urban Environment APL Project, which was proposed in response to the needs of environmental protection and treatment in the suburban districts of Shanghai, in order to create an innovative investment and financing management program to provide the World Bank loans in various districts and counties in Shanghai. Therefore, the Shanghai Municipal Government (**SMG**), the World Bank and Shanghai Chengtou jointly established DFV in the APL project on the 6th of December, 2004, aiming to provide

long-term financing for Shanghai district environmental infrastructure sub-projects. The operating entity of DFV is **Shanghai Chengtou Environment Asset Management Co., Ltd.** (referred to as "CEAM"), with a registered capital of RMB 20 million. It is currently a wholly-owned subsidiary of Shanghai Chengtou (Group) Co., Ltd.

1.3.1 WB Financed Project Management under DFV

Adaptable Program Loan (APL) was used in the Shanghai Urban Environment APL project, with the total World Bank loan of 580 million US dollars. This project implemented in three phases. The first, second and third phases of APL were US$200 million, US$180 million and US$200 million respectively. APLII and APLIII loans are single-currency variables spread US dollar loans. The maturity of APLII loan is 20 years (2005-2025) with the grace period of 5 years, the front-end fee rate of 0.25% and the commitment fee rate of 0.75%. APLIII loan canceled commitment fee, with the maturity of 30 years (2009-2039), a grace period of 5 years and front-end fee rate of 0.25%.

As an important platform for Shanghai Municipality to undertake the World Bank loan business, DFV has obtained the management authority of total US$60 million World Bank loan in the APL II and APL III projects, which means that DFV can make independent project screening, assessment and management in accordance with the World Bank approved **DFV Operations Manual**, determine the "on-lending" terms and conditions of the World Bank loan, and realize the "on-lending" function of the World Bank loan through a specific contract-based structure and acting as a "trust agent".

The capital flow of World Bank loans is shown in Figure 1-5:

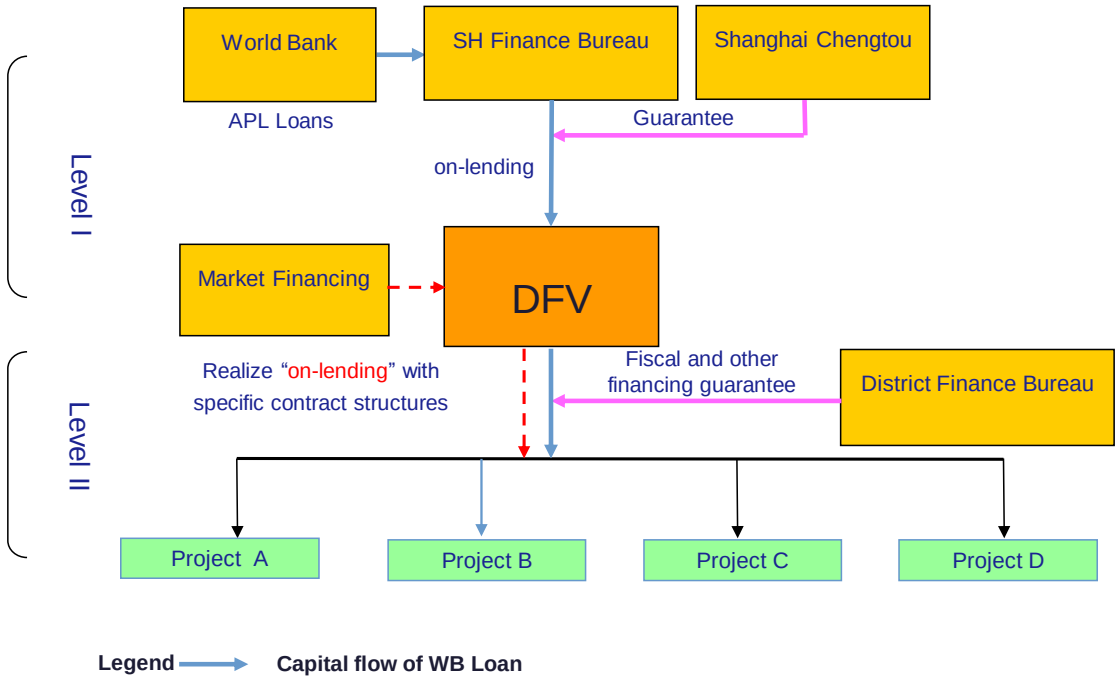

Figure1-5 DFV's pattern for using WB loans

Since its establishment, DFV has adhered to financial innovation, organizational innovation and management innovation, learning from the World Bank's "knowledge"-centered financing model, and managed about $200 million World Bank loans for six small and medium-sized environmental projects in districts and counties in Shanghai through providing financing support and management services. In the meanwhile, DFV has provided the comprehensive, one-stop consulting services for the World Bank-financed Nanhui Branch Sub-project under Shanghai Qingcaosha Water Source Project.

The APL II and III World Bank-financed sub-projects supported and managed by DFV are detailed in Table 1-3.

Table 1-3 The APL II and III World Bank-financed sub-projects supported and managed by DFV

Project Name	Total Investment (RMB)	WB Loan (USD)	Resources	Remarks
Chongming Chengqiao WWTP (Phase I)	202 m	4.705 m	APL II	Commercial operation in July 2007
Chongming MSW Landfill (Phase I)	110 m	3.204 m	APL II	Commercial operation in Aug. 2007
Qingpu Huaxin Trunk Sewer (Phase I)	140 m	6.448 m	APL II	Commercial operation in Oct. 2007
Qingpu Baihe Trunk Sewer	1.36亿/136 m	8.70 m	APL II	Commercial operation in Apr. 2009
Xujing Water Plant Expansion Project	298 m	4.941 m	APLII/III	Commissioning in July 2017
Minfeng Raw Water Conveyors Project	831 m	2.721 m	APLIII	Commercial operation in Dec. 2016
Shanghai Qingcaosha Water Source Project -Nanhui Conveyor Project	2.4 b	140m (not financed through DFV)	APLIII	DFV provides one-stop **consulting services** for it. Mainly complete in 2012
DFV's Capacity Building (including OM, external experts and etc.) (APL III IST)		240 000 3.4 m	APL II APLIII	

Through more than ten years of operation, DFV has gradually accumulated a set of standardized management experiences of World Bank loans, including project screening, project evaluation, investment management, financial management, environmental and social safeguard management, procurement management and institutional capacity building, which has improved DFV team's management ability and service level.

1.3.2 Environmental and Social Safeguard Management Capabilities of DFV

DFV has set up a safeguarding team with 4 environmental and social professionals to successfully carry out environmental and social management in terms of environmental treatment projects such as urban sewage treatment systems, water supply systems, solid waste treatment and disposal supported by DFV. In the sub-project screening and evaluation stage, the DFV safeguard team is responsible for completing the adjustment, review, and evaluation of the security management of nearly 20 sub-projects. During the implementation phase of the sub-project, the safeguard team completed the supervision and inspection of implementation and effectiveness of the sub-projects' environmental and social management plan, and submitted roughly 35 semi-annual progress reports of the Shanghai Urban Environmental Governance APL Phase II and Phase III DFV sub-projects to the World Bank on a regular basis (including environmental and social external monitoring reports).

Prior to the closing of the Shanghai Urban Environmental Governance APL Phase II and Phase III World Bank Loan Projects, DFV assisted the Shanghai Development and Reform Commission and the World Bank Project Office PMO in the preparation of the Shanghai Urban Environmental Governance APL Phase II and Phase III completion reports. Environmental and social external experts provide technical support and guidance to DFV during the sub-project evaluation and implementation phase. Therefore, DFV has formed a sound environmental and social management system and cultivated a talent team with rich environmental and social management ability of WB-funded sub-projects.

1.3.3 Capability building and Consulting Services

1) Implementation of APL III IST Component

In order to ensure the successful implementation of APL III IST (Institutional Strengthening Training) Component, DFV assisted Shanghai Chengtou in investigating and analyzing the demands of IST sub-projects, and identifying the shortfalls and weaknesses in project investment, construction and management; designed a series of perspective IST implementation plan that met the strategic needs of Shanghai Chengtou; and provided Shanghai Chengtou and its subsidiaries with practical and effective institutional strengthening trainings. The implementation of APL III IST Component has been unanimously recognized and praised by the World Bank, government departments and project implementation units.

During the implementation of APL III project financed by the World Bank (2009-2017), DFV initially implemented APL III IST sub-projects with the support of US$ 3.4 million of World Bank loan. During that period, DFV organized 4 international high-level seminars for Shanghai Chengtou and its subsidiaries, including Climate Change and Urban Development Seminar in 2010, Technology and Application of Municipal Sludge Treatment and Disposal High-level Seminar in 2011, Energy Efficiency Technology Development & Application Workshop in 2012 and Urban Infrastructure Investment & Financing Seminar in 2013. DFV assisted the

implementation of 13 overseas studies and training at home and abroad on innovative investment and financing of infrastructure, water and wastewater project management, and operation. In 2013, DFV translated and published 3 World Bank Literatures: ***Public-Private Partnerships for Urban Water Utilities***, ***A Primer on Energy Efficiency for Municipal Water and Wastewater Utilities and Planning***, ***Connecting & Financing Cities-Now***, which received recognition and praise from the World Bank Group and relevant government departments. In addition, DFV also coordinated and assisted some studies on Shanghai Chengtou Corporation Finance Capabilities Strengthening Project, Shanghai Municipality Water Resource Comprehensive Management and Safeguard Study and so on.

2) Provision of consulting service for the Implementation Completion Reports (ICRs) of World Bank-financed APL II and APL III projects

Based on the management experiences and achievements of World Bank-financed sub-projects, DFV successfully completed the ICRs of World Bank-financed APL II and APL III projects under the consignment of SHDRC, which were financed by the World Bank of US$180 million and US$200 million respectively.

3) Provision of consulting service for Amanishah Nallah River Comprehensive Rehabilitation Project in Jaipur, India.

Since 2015, DFV had taken the first step of milestone to provide technical consulting services for the secondary tributary of the Ganges River in India, namely the Amanishah Nallah River Comprehensive Rehabilitation Project in Jaipur; preparing the project consulting proposals and review reports for the project feasibility study and hydrological review, the preparation of English reports on river hydrodynamic modeling research. In March 2016, Shanghai Urban Construction International Engineering Co., Ltd. (SUCGI) cooperated with TATA Group, India's largest commercial group, to win the bid jointly and carried out this project in improvement, pollution interception and control, waters activation and ecology reconstruction for the Amanishah Nallah River in Jaipur.

1.3.4 Market Development

In addition to the management business of APL World Bank loans, DFV was also responsible for the project market development. The main achievements included the development and acquisition of the Project of Songjiang Southern Wastewater Treatment System (BOT/BT), Huaxin Wastewater Treatment Plant Project (BOT), Xujing Wastewater Treatment Plant Project (TOO) and Pipe Network Engineering (BT), Jinshan Langxia Wastewater Treatment System Project (BOT/BT), and Qingpu Baihe Wastewater Treatment Plant Project (BOT); participated in early development of projects of Jinshan Residue Sanitary Landfill and Wastewater Treatment Plants in Xinhe and Baozhen of Chongming County; prepared financing plan for Laogang Industrial Solid Waste Landfill Project and development plan for supporting parcels of Hongqiao Zoo; provided financing plan for Phase III Expansion Project of Jiading Solid Waste Center for exploration of introducing International Finance Cooperation (IFC) funds and World Bank loan, etc.

DFV team also actively extended the projects beyond Shanghai. It has successively participated in the investment attraction of the Management Right Assignment Project of Nanjing Chengbei Wastewater Plant, and in the development of extra-territorial projects such as sewage and sludge treatment in Shandong Jimo, Haining and Jiangyin. It has reserved a number of high-quality extra-territorial project resources, exercised the team, improved the capability, and accumulated valuable experience in competing in the market of large extra-territorial projects.

1.3.5 Equity investment

In order to facilitate the development of environmental protection industry in Shanghai and the Yangtze River Delta region and to promote the construction of international financial center, in December 2009, DFV and CCB International Financial Management (Tianjin) Co., Ltd. jointly established the CCBI Chengtou (Shanghai) Clean Tech Equity Fund Management Co., Ltd., with a registered capital of RMB 20 million; each of the shareholders holds 50% of the shares. This fund management company was responsible

for fund investment and operation, with first-round capitals of RMB 1.8 billion, mainly invested in the fields of new energy, water business, new building materials and so on. At the end of December 2017, DFV withdrew its equity investment in fund management companies successfully.

1.4 Relationship between FSC and DFV

After the FSC is established, the original management staff from DFV and its experts in external expert panel (mainly including environmental and social experts) will be transferred to the FSC as well.

This will fully embody the inheritance and institutional optimization of FSC from DFV. With the business development, the number of employees will gradually develop from 18 people in the initial stage (2018-2020) to 30 people in the medium-term stage (2020-2025), and then 46 people in the long-term stage (after 2025).

The FSC will set up the compliance and risk control department in the initial stage, which will be responsible for controlling the relevant risks of FSC, including environmental and social risks, investment risk, interest risk, foreign exchange risk and so on.

The FSC will set up the International Business Department, which will deploy senior managers with rich World Bank or other international financial institutions' project management experiences. According to the actual progress of the project, full-time professional experts will be appointed in the initial stage. Among them, the International Business Department will set up a Safeguard Team with full-time specialists for environmental and social management.

1.5 Components of the WB/KfW Loan

The components of the WB/KfW loan obtained for this project is proposed to classify into three components:

1）Component1: Project Loan

This part of Co-financing loan including 172 million USD from WB and 150 million

EURO from KfW. It will provide long-term, low-cost co-financing loan funds for some eco-environmental protection and new urbanization development sub-projects in Shanghai, Jiangsu, and Zhejiang Provinces.

2）Component2: Credit Enhancement

The World Bank plans to provide FSC with a credit enhancement loan of 20 million USD to address the potential problems of non-performing loans or liquidity gaps in FSC in the near future.

3）Component3: Institutional Development Plan (IDP)

The World Bank plans to provide FSC with an IDP loan of 8 million USD to support FSC and its shareholders, external expert team, sub-project owners and local governments etc. to build capacity and to improve project identification, design, investment, operation, management capabilities and service level.

2 Objective, Scope, and Procedures of the ESMF

2.1 Objective of the ESMF

Based on the requirements of Environmental Impact Assessment (EIA) in World Bank ś Security Policy OP4.01, it is necessary to manage the environmental and social impact from the Project by the *ESMF* to make sure it is in line with China ś laws and World Bank and KfW's policies.

The purpose of the *ESMF* is to provide a guide to the FSC and the proposers of the Sub Projects in conducting environmental and social screening, follow-up evaluation and implementation of Sub-Projects, including detailed Sub-Projects plans following World Bank and KfW's Policies and China ś laws and regulations, to specify appropriate roles and responsibilities, and outline the necessary reporting procedures for managing and monitoring environmental and social concerns related to sub-projects, to determine the training and technical assistance needed to successfully implement the provisions of the ESMF; and to establish the program funding required to implement the ESMF requirements.

2.2 Scope of the ESMF

The framework sets out the procedure for selection, multi-level assessment, and management of the financed sub-projects supported by **Co-financing loan**, roles, and duties of the institutions, and public participation and grievance procedures. By adhering to the procedures, the sub-projects will fulfill the World Bank and KfW's environmental and social safeguard policies and China's environmental regulations.

The framework applies to **all sub-projects which will be financially supported by the Co-financing loan in project implementation**. The consistent ESMF will be utilized to assess environmental and social impacts, and where needed, to develop the mitigation and control plans.

The first subproject in each sector will be subject to Bank prior review and clearance to ensure the appropriateness of ESMF implementation and E&S risk management by

FSC at the startup stage. If the first sub-project is Category B, then the first Category A sub-project in that sector will also be subject to prior review. The Bank will retain the right of prior review and clearance of Category A subprojects until the FSC can demonstrate its capacity to manage safeguards issues on its own, which based on the experience of previous APLs is expected to be on a limited number of subprojects.

2.3 Procedures of the ESMF

This framework will be used to guide the implementation of environmental and social management procedures during the implementation of the sub-project. In the preparation and implementation of each sub-project, information disclosure and public participation will be carried out in accordance with domestic regulations and World Bank policies, moreover, an effective complaint mechanism should be established to ensure that the environmental and social demands of stakeholders of sub-projects and the general public are timely reflected and dealt with. For sub-projects using Co-financing loan, the sub-borrower should follow the following steps in environmental and social management during its application for approval and implementation:

- Step 1: Environmental and social risk screening and due diligence
- Step 2: Risk Classification and Determination of Safeguards Document Requirements
- Step 3: Development of environmental and social safeguard documents
- Step 4: Disclosure and public participation
- Step 5: Review and approval of safeguard documents
- Step 6: Implementation, supervision, and monitoring of sub-project environmental and social management plan.

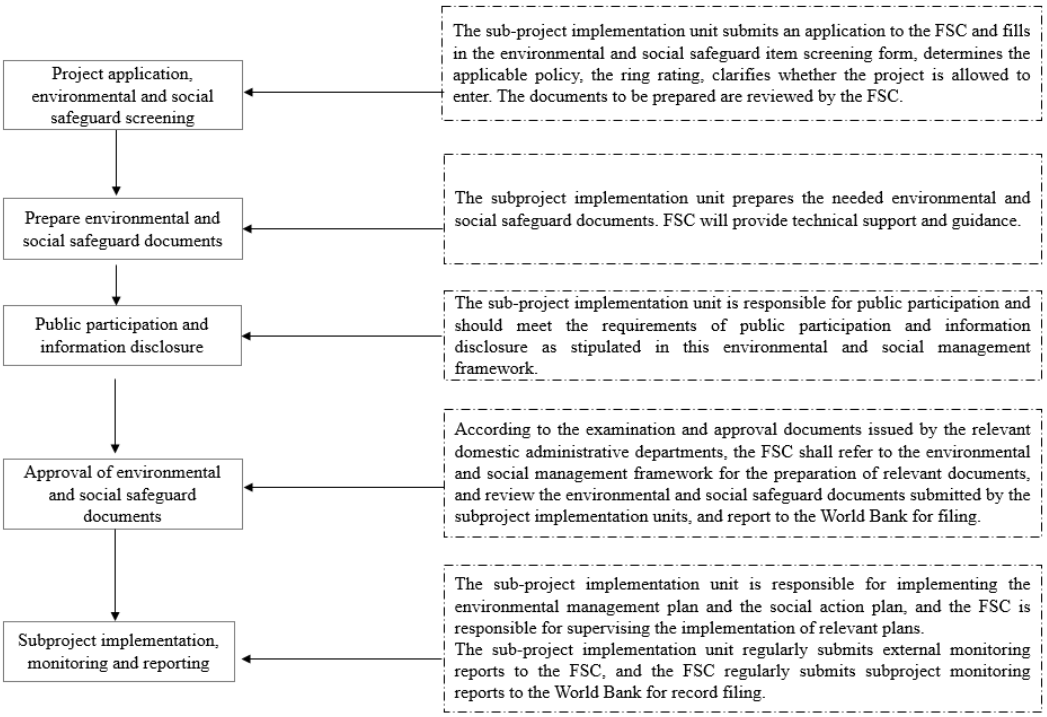

Figure2-1 Environmental and social safeguard management procedures

3. Conformity of the Framework and Management Requirements

3.1 World Bank's Safeguard Policies

The World Bank's safeguard policies pertaining to this project are listed out in Table 3-1. In addition to the safeguard policy, this framework refers to the relevant environmental health and safety guidelines like (General EHS Guidelines, EHS for Water and Sanitation, EHS for Waste Management Facilities, etc.) covered by the International Finance Corporation (IFC).

Table 3-1 Conformity Analysis of ESMF against the World Bank's Safeguard Policies

No.	Policy	Applicability	Remark
1	OP 4.01 Environmental Assessment	Yes	The FSC will provide support for urban environmental infrastructure construction in the fields of water supply, sewage, municipal waste, river regulation, etc. ESMF has been developed for Type A and Type B projects. Information disclosure and public participation are also undertaken in accordance with OP 4.01.
2	OP 4.04 Natural Habitats	Yes	Although the likelihood of involving any natural habitat is not so high based on previous experience of similar projects in this highly urbanized region, the policy is still triggered from precautionary perspective considering project uncertainty at this stage. As defined in the ESMF, any sub-project involving significant conversion or degradation of critical natural habitats will be excluded from project financing at screening stage, and environmental assessment for subprojects will include the analysis of any natural habitat issue with necessary mitigation measures proposed in the sub-project EMPs.
3	OP 4.09 Pest Management	No	No pesticide or other agrochemicals will be purchased by FSC.
4	OP 4.11 Physical Cultural Resources	Yes	The specific locations of sub-projects that are financially supported by World Bank will not be made available until their implementation. Based on earlier experience, it is recommended to trigger the policy from precaution perspectives. Sub-projects that trigger this policy should complement the preparation of physical and cultural resource management plans in the EMP.
5	OP 4.36 Forestry	No	The activities that may affect the forest ecosystem or the communities relying on forest resources will not be financed by FSC.
6	OP 4.37 Safety of Dams	Yes	The specific locations of sub-projects that are financially supported by World Bank will not be made available until their implementation.

No.	Policy	Applicability	Remark
			Based on earlier experience, it is recommended to trigger the policy from precautious perspective.
7	OP 4.12 Involuntary Resettlement	Yes	If the sub-project involves land acquisition for immigrants, the resettlement policy framework should be developed. The Resettlement Policy Framework (7.3) is prepared. If the sub-project touches on relevant policies, it is necessary to prepare a Resettlement Action Plan (RAP).
8	OP 4.10 Indigenous Peoples	Yes	If the sub-project involves ethnic minority gathering places, the ethnic group development framework should be prepared. The Ethnic Group Development Framework (7.4) has been prepared. If the sub-project touches on relevant policies, it is necessary to prepare an Ethnic Minority Development Plan (EMDP).
9	OP 7.50 Projects on International Waterways	No	No international watercourses are involved in any sub-projects.
10	OP 7.60 Projects in Disputed Areas	No	No disputable regions are involved in any sub-projects.
11	BP17.50 Information Disclosure	Yes	It applies to sub-projects supported by the FSC.
12	Environmental, Health and Safety Guidelines	Yes	It applies to sub-projects supported by the FSC.

3.2 China’s Environmental Laws and Regulations

3.2.1 List of Major Applicable Legislation

The major applicable laws and regulations of the People’s Republic of China include the following:

1) Environmental Protection Law of the People’s Republic of China, 2014
2) Environmental Impact Assessment Law of the People’s Republic of China, 2016
3) Measures for the administration of pollutant discharge permits (trial), 2018
4) Water Law of the People’s Republic of China, 2016
5) Agriculture Law of the People’s Republic of China, 2012
6) Water Pollution Prevention and Control Law of the People’s Republic of China, 2017
7) Law of the People's Republic of China on Prevention and Control of Environmental Pollution by Solid Waste, 2016

8) Law of the People's Republic of China on Prevention and Control of Environmental Noise Pollution, 2016
9) Air Pollution Prevention and Control Law of the People's Republic of China, 2015
10) Law of the People's Republic of China on Water and Soil Conservation, 2010
11) Environmental Protection Tax Law of the People's Republic of China, 2016
12) National Catalogue of Hazardous Waste, 2016
13) Law of the People's Republic of China on Cultural Relic Protection, 2017
14) Law of the People's Republic of China on Land Administration amended in 2017
15) Cleaner Production Promotion Law of the People's Republic of China, 2012
16) Energy Conservation Law of the People's Republic of China, 2016
17) Renewable Energy Law of the People's Republic of China, 2009
18) Regulation on Urban Drainage and Sewage Treatment, 2013
19) Regulation on Environmental Impact Assessment of Planning, 2009
20) Regulations on the Administration of Construction Project Environmental Protection, amended in 2017
21) Circular on Issuing the Implementing Proposals for the Reform of Environmental Impact Assessment during the 13th Five-year Plan Period, 95/2016/EEA, 2016
22) Guide on Public Participation in Environmental Protection, 48/ 2014/EO, 2014
23) Measures for Public Participation in Environmental Impact Assessment, 4/MEE, enacted on January 1, 2019
24) Corporate Environmental Credit Rating Measures (Trial Edition), 2014
25) Regulation of the People's Republic of China on Nature Reserves, 2017
26) Regulation on Implementation of the Water and Soil Conservation Law of the People's Republic of China, 2011
27) Administrative Measures for the Safety of Places of Origin of Agricultural Products, 2016
28) Notice of the China Banking Regulatory Commission on Printing and Distributing Green Credit Guidelines [2012] No. 4

3.2.2 Technical Guideline for Environmental Impact Assessment

1) General Principles, Technical Guideline for Environmental Impact Assessment, HJ 2.1-2016
2) Soil Environment (Trial), Technical Guideline for Environmental Impact Assessment, HJ 964-2018
3) Atmospheric Environment, Technical Guideline for Environmental Impact Assessment, HJ 2.2-2018
4) Acoustic Environment, Technical Guideline for Environmental Impact Assessment, HJ 2.4-2009
5) Groundwater Environment, Technical Guideline for Environmental Impact Assessment, HJ 610-2016
6) Surface-water Environment, Technical Guideline for Environmental Impact Assessment, HJ 2.3-2018
7) Technical Guideline for Environmental Risk Assessment of the Development Project, HJ 2.1-2011
8) Urban Rail Transit, Technical Guideline for Environmental Impact Assessment, HJ 453-2008
9) Ecological Environment, Technical Guideline for Environmental Impact Assessment, HJ/T 19-2001

3.3 Social Safeguard Management System

Sound social safeguard management systems have been established for Chinese investment projects, mainly including a management system for project social risks, and a social management system for LA and HD.

The management system for project social risks requires that the project must meet the ultimate needs of most people, and a social stability risk evaluation must be

conducted for major fixed asset investment projects. The National Development and Reform Commission promulgated the Interim Measures for the Social Stability Risk Evaluation for Major Fixed Asset Investment Projects in 2012, and the provinces (municipalities and autonomous regions) have also promulgated relevant measures. The Measures stipulate that municipal / county development and reform commissions should include an evaluation opinion on social stability risks in project application documents submitted to the provincial development and reform commissions as a basis for project approval.

China has established institutional arrangements for project social stability risk assessment. The project developer shall be responsible for preparing or entrusting consulting institutions to prepare social stability risk assessment and analysis reports; The people's government of project location shall review and appraise the social stability risk analysis made by the project developer and propose the social stability risk evaluation report.

A social stability risk evaluation includes: 1) if any major matter is scientific, meets ultimate needs of most people (including minority areas), is financially affordable, and is understood and supported by most people (especially minority areas); 2) if any major matter has been subject to rigorous research and demonstration to fully consider various restraints; if the program is detailed and specific, and if supporting measures are sound; 3) if there is any strong objection to the project among local people, if any major event of public security and stability will occur, and if there is any contingency plan; and 4) potential major issues affecting social stability.

A social stability risk evaluation also includes the evaluation of LA, HD, and minority culture protection risks.

The PRC has developed a complete legal framework and policy system on LA, HD, resettlement and compensation, including the Land Administration Law of the PRC (amended on August 28, 2004), and the Regulations on House Acquisition on State-owned Land and Compensation (Decree No.590 of the State Council). Within

the state legal and policy framework, local governments have promulgated relevant local regulations and policies to manage and direct local LA, HD, resettlement and compensation work.

For the development of minority areas, the PRC has promulgated the Law of the PRC on Regional Ethnic Autonomy, Regulations on the Administrative Work of Ethnic Minority Townships in the PRC, 13th Five-year Plan for Ethnic Minority Programs, etc. The objectives are to respect the dignity, rights, economy and culture of ethnic minorities, promote their equality and development, and pay special attention in their economic, social and cultural development to protect their rights and interests, and improve their social and economic status.

3.4 Management System Gap Analysis

3.4.1 Environmental Management System Gap Analysis and Measures

The EIA is managed by Ministry of Environmental Protection (MEP, recently renamed as Ministry of Ecological Environment, MEE) and its Environmental Protection Bureaus (EPBs) at provincial, municipal and district/county levels. EIA documents are reviewed at different levels depending on thresholds of investment, level of approval for the project proposals as well as environmental sensitivities. Technical review is through an expert panel system with expert pools established at national, provincial and municipal levels. During construction, the mitigation measures are implemented by contractors and supervised by the project proponent and supervision engineers, as well as routine and/or random on-site supervision from local EPBs (through their supervision and enforcement teams, normally known as Environmental Enforcement Squad). Upon project completion, a mandatory environmental acceptance examination is required to be conducted by the EPB that approved the EIA. A project can only formally start operation after the passing the environmental acceptance examination. After comparing World Bank's safeguard policies and China's legislation, it is concluded that no significant gap is found pertaining to the requirements of Environmental Impact Assessment (EIA) for

development projects. In terms of implementation, a few discrepancies listed below are worth noting.

（1）**Classification of EIA studies**: Quantitative indicators and thresholds are set in China's *Catalogue for the Categorized Administration of Environmental Impact Assessments* to determine whether an EIA report or form is to be completed. It also stipulates three levels of study in the EIA report. The World Bank adopts qualitative methodology instead. Experts are involved to evaluate and determine the level of EIA study, which includes Level A, Level B, and Level C, per the relevant environmental assessment policies. Level A requires a full-scale EIA study, equivalent to the EIA report required in China. Level B is a simplified EIA approach equivalent to China's EIA form. Similar as China's EIA registration form, which is lodged with the local environmental protection authorities only, no EIA is required to be conducted under Level C.

（2）**Public consultation**: for public participation and information disclosure, China's requirements are nowadays becoming consistent with those in OP 4.01, it is mandatory to carry out public participation in the construction project EIA report, except where the state requires confidentiality. Before the draft of the plan is submitted for approval, an argumentation meeting, a hearing, or another form shall be held to solicit opinions from relevant units, experts and the public on the draft environmental impact report. After the examination and approval, the environmental impact assessment document shall be published in full.

（3）**Development of EIA document outline**: drafting a document outline of the EIA report is compulsory in China, of which the structure is pre-established and the content is rich enough as a mini EIA study. The World Bank's policies do not necessitate the development of an EIA outline though, which, with no pre-established structure, serves to provide a roadmap to the EIA study and specifies tasks, methods, and requirements.

There are relevant requirements in China corresponding to the World Bank's safeguard

policies, and the construction and operation of sub-projects will be undertaken in accordance with the laws and regulations. The World Bank's policies are **generally consistent** with China's legal requirements, and the ESMF has **covered all these respects**.

3.4.2 Discrepancy in Social Safeguards System and Measures

The social safeguard management system for Chinese investment projects is consistent with that of the Bank, namely to realize the project objective sand mitigate social risks, but there are some differences.

- Chinese policies require that a social stability risk evaluation is conducted, and more attention is paid to measures that affect social stability without stressing measures that promote social fairness and inclusiveness.
- Except for large and medium water resources and hydropower projects, preparing a RAP is not required at the preparation stage, except simple forms required for land approval.
- Although Chinese policies require that measures be taken to ensure that affected minority residents receive social and economic benefits suited to their cultural customs, and minimize potential negative impacts on minority residents, preparing an EMDP is not required.
- Except for large and medium water resources and hydropower projects, M&E on the RAP, SAP, and EMDP is not required at the implementation stage.

To strengthen social management, realize the social objectives of the Project, promote social fairness, inclusiveness, and sustainability, and improve FSC's social management capacity, FSC promises to act on the Bank's social safeguard policies. The following measures are proposed:

- A social assessment is conducted to address social risks, poor population, gender development, and people's well-being.
- A RAP should be prepared at the preparation stage if LA and HD are involved

(Chapter 7).

- An EMDP should be prepared at the preparation stage if any minority habitat is involved (Chapter 7).
- M&E on the RAP, SAP, and EMDP should be conducted at the implementation stage.

4. Sub-projects Introduction and Analysis of Potential Environmental and Social Risks

4.1 sub-projects Description

The types of sub-projects to be invested by FSC mainly include the following:

1) **Water environmental protection and sustainable use projects**.

Such projects include, but are not limited to urban sewage treatment plants, urban water-saving renovation, industrial wastewater treatment, municipal pipe network construction and reconstruction, urban water supply, drainage flood control facilities. Meanwhile, we are interested in ecological construction projects like urban parks, wetlands and sponge cities. Control of lake eutrophication and odorous river treatment are also the projects we plan to invest on.

2) Solid waste treatment and resource recycling projects.

Such projects include but are not limited to: landfill and incineration of domestic waste, solid waste recycling and reuse, old solid waste excavation and retreatment, utilization of kitchen waste resources, sanitation machinery and complete sets of equipment, waste transfer systems, industrial solid waste treatment, and disposal, municipal sludge resource utilization management.

3) Municipal soil remediation and comprehensive management projects.

We will consider the environmental remediation projects such as urban soil remediation, biodiversity conservation projects, contaminated agricultural land remediation, and sludge in situ stabilization disposal projects.

4) Urban new energy and energy-saving renovation projects.

We are concerned about urban new energy and energy-saving renovation projects. Urban new energy infrastructure, biomass power generation, photovoltaic power generation, and energy-saving renovation of large public buildings, those

aforementioned projects may be invested in the future.

4.2 Identification of Potential Environmental and Social Risks of the Sub-projects

The environmental impact identification of the sub-projects includes the environmental impact during the construction period and the operation period. The types of subprojectssub-projects to be invested include water resource treatment, solid waste treatment, and resource utilization, environmental comprehensive management and other projects.

Figure4-1a Identification of Potential Environmental Impacts Arising from the Sub-projects

Project Name	Description	Analysis of Potential Environmental Risks- construction period	Analysis of Potential Environmental Risks- operation period
1. Projects pertaining to water resources, protection of water environment and sustainable use of water			
Municipal water conservation retrofit	Address water shortage, poor water quality, and water security issues. Provide a centralized water supply system or municipal healthy water cycle.	Environmental impacts commonly observed during the construction, which including the impacts of sewage water, dust, noise, land occupation, and soil erosion.	There is a little environmental impact.
Municipal sewage treatment	Construction of rural sewage and urban sewage treatment facilities	Typical environmental risks are atmospheric, noise, wastewater pollution and ecological environment impacts caused by construction, excavation, land occupation, transportation, and other engineering activities.	Sewage and sludge produced during operation may pollute soil environment, surface water, and groundwater. And mechanical noise and waste gas produced by chemical substances cause-effect to air quality.
Industrial wastewater treatment	Renovate and relocate Conventional wastewater treatment systems; provide advanced treatment	Environmental impacts commonly observed during the construction, which including the impacts of sewage, dust, noise, land occupation and soil erosion.	The industrial wastewater produced in the operation period contains a lot of organic matter, waste gas, solid waste and so on, which will have an impact on the surrounding environment.
Municipal pipe network retrofit	Provide rural and urban wastewater treatment facilities, retrofit old pipe network, and optimize of urban pipe network layout.	In the construction process, there will be a certain amount of noise, air, surface water, and groundwater pollution, solid waste pollution such as dregs, waste materials, as well as occupying roads, destroying green belts and other ecological effects.	Air quality will be affected, mainly for a small amount of odor produced by interception wells, inspection wells in the daily maintenance and repair process, while there will be solid waste pollution which mainly results from interception wells, inspection wells in the process of removing waste residue which will be collected to harmless treatment.
Urban water supply, waterlogging prevention and flood protection	New and reconstruction of urban drainage and waterlogging prevention facilities and improvement of urban drainage, waterlogging prevention, flood control, and disaster reduction capabilities	The environmental risks during the construction period include construction wastewater (rainwater surface runoff, groundwater, construction wastewater and domestic sewage of construction workers). atmospheric pollution and noise effects, such as dust and exhaust gas, caused by construction excavation and transportation activities. And solid waste pollution such as waste material during the construction period.	The main environmental risks during the operation period are water resources management and control in the rainy season, road blockage and solid waste pollution
Construction of parks, wetlands and sponge cities	Renovating ecological development and community retrofit	In the construction process, there will be a certain amount of noise, air and water pollution. soil and vegetation will also be damaged in a degree, which will cause soil erosion.	It is necessary to focus on environmental hydrogeological problems and groundwater level changes.
Management of polluted and smelly waterways and eutrophic lakes	Widening and dredging of the waterway, Landscaping, Improvement of the urban environment etc.	In the construction process, there will be a certain amount of noise, air and water pollution. soil and vegetation will also be damaged in a degree, which will cause soil erosion.	It is mainly the influence of harmful gases such as odor produced by biogas fermentation, the pollution of surface water environment and domestic waste, sludge and the environmental and ecological effects of subsequent ecological restoration and treatment.

Project Name	Description	Analysis of Potential Environmental Risks- construction period	Analysis of Potential Environmental Risks- operation period
2. Projects disposing of and recycling Solid waste			
Municipal solid waste incineration and landfill	Landfill incineration residue, simple dump, closure repair, and secondary pollution control, and the comprehensive treatment of the stock waste	The main environmental pollution effects during the construction period are domestic wastewater, mixed fly ash, fly ash in a landfill, fuel exhaust gas and noise pollution of construction machinery. At the same time, groundwater, soil, and vegetation will be damaged in some degree, and soil erosion will occur.	leachate (containing heavy metals) produced in operation period may infiltrate into the groundwater or rive.dioxins, polycyclic aromatic hydrocarbons, dust and other substances produced during the treatment process will cause a certain degree of pollution to the atmospheric environment.
Solid waste recycling and reusing	Take management and process measures to recycle material and energy from solid waste, and accelerate the cycle of material and energy.	dust produced in the Construction, excavation and transportation process, residue and vehicle exhaust, domestic sewage and cleaning wastewater, construction noise, domestic waste and a small amount of construction waste.	Workers' domestic sewage and incineration tail gas have an impact on the surrounding atmospheric environment. Various pollutants in the exhaust gas may have a certain impact on soil quality and groundwater through sedimentation.
Sludge harmless treatment and disposal	Municipal sludge is harmless, resource-resourced and stabilized.	The main sources of influence on the regional atmospheric environment during the construction period are construction dust, construction machinery fuel exhaust, vehicle exhaust, domestic sewage and cleaning wastewater, construction noise, domestic waste and a small amount of construction waste.	Sludge containing pathogens, heavy metals, and other toxic and harmful substances, which is liable to cause secondary pollution to groundwater and soil, and produce waste gas pollution, which has a certain impact on the ecological environment.
3. Projects remediation, comprehensive development, and utilization of Urban Soil			
Soil remediation/ Biodiversity conservation/ Contaminated Agricultural-land remediation/ Stabilization of sludge in situ	Soil remediation/ Biodiversity conservation/ Contaminated Agricultural-land remediation/ Stabilization of sludge in situ	The main sources of influence on the regional atmospheric environment during the construction period are construction dust, construction machinery fuel exhaust, vehicle exhaust, domestic sewage and cleaning wastewater, construction noise, domestic waste and a small amount of construction waste.	Due to the imperfect of the anti-seepage measure during the operation of environmental rehabilitation projects, it may have an impact on the water environment, and ecological pollution should also be focused on.
4. New energy and energy conservation projects			
Photovoltaic power generation and biomass power generation (urban sludge, livestock farming)	Using feces, straw, biological waste, and other raw materials to develop "industrial biogas".	The main sources of influence on the regional atmospheric environment during the construction period are construction dust, construction machinery fuel exhaust, vehicle exhaust, domestic sewage and cleaning wastewater, construction noise, domestic waste and a small amount of construction waste.	Non-fossil energy projects have less impact on the atmospheric environment, but the air pollutants generated during the utilization of biomass energy projects need to be strictly monitored. And solid waste and sound environmental impact also need to be concerned.

Figure4-1b Identification of Potential Social Impacts Arising from the Sub-projects

Project Name	Location	Description	Analysis of Potential Environmental Risks	Associated WB's Safeguard Policy
1. Projects pertaining to water resources, protection of water environment and sustainable use of water				
Municipal sewage treatment and municipal water conservation retrofit	Shanghai Jiangsu Zhejiang	Construction of rural sewage and urban sewage treatment facilities	Involuntary Resettlement Ability and willingness to pay of low-income population Women's participation and impacts If any She habitat is involved in the Zhejiang sub-project area, an EMDP will be prepared.	OP4.12 OP4.10
Industrial wastewater treatment and municipal sewage system retrofit		Renovate and relocate wastewater treatment systems; provide sludge treatment facilities and tertiary treatment	Involuntary Resettlement Public participation in sludge disposal and transport (women's participation Ability and willingness to pay of low-income population If any She habitat is involved in the Zhejiang sub-project area, an EMDP will be prepared.	OP4.12 OP4.10
Urban water supply and wastewater drainage, waterlogging prevention and flood protection		Address water shortage, poor water quality, and water security issues. Provide a centralized water supply system.	Involuntary Resettlement Ability and willingness to pay of low-income population Rural participatory wastewater management (women's participation) If any She habitat is involved in the Zhejiang sub-project area, an EMDP will be prepared.	OP4.12 OP4.10
Parks, wetlands and sponge cities		Renovate ecological development and community retrofit	Involuntary Resettlement Ability and willingness to pay of low-income population Rural participatory wastewater management (women's participation) If any She habitat is involved in the Zhejiang sub-project area, an EMDP will be prepared.	OP4.12 OP4.10

Project Name	Location	Description	Analysis of Potential Environmental Risks	Associated WB's Safeguard Policy
Management of polluted and smelly waterways and eutrophic lakes		Widening and dredging of the waterway, Landscaping; Improvement of the urban environment etc	Involuntary Resettlement Ability and willingness to pay of low-income population Rural participatory wastewater management (women's participation) If any She habitat is involved in the Zhejiangsub-project area, an EMDP will be prepared.	OP4.12 OP4.10
2. Projects pertaining to soil waste management and resources recycling and recovery				
Solid waste management, garbage treatment	Shanghai, Jiangsu, Zhejiang	Waste incinerator, landfill and biogas power projects	Involuntary Resettlement Environmental impacts of incineration plant (NIMBY) Health impacts Women's participation and impacts If any She habitat is involved in the Zhejiangsub-project area, an EMDP will be prepared.	OP4.12 OP4.10
3. Projects remediation, comprehensive development, and utilization of Urban Soil				
Soil remediation, biodiversity conversation, remediation of contaminated agricultural lands, and in situ sludge stabilization	Shanghai, Jiangsu, Zhejiang	Soil remediation, biodiversity conversation, remediation of contaminated agricultural lands, and in situ sludge stabilization	Involuntary Resettlement Ability and willingness to pay of low-income population Rural participatory wastewater management (women's participation) If any She habitat is involved in the Zhejiangsub-project area, an EMDP will be prepared.	OP4.12 OP4.10
4. **New energy and energy conservation projects**				
Photovoltaic power and biomass power systems (eg. Urban sludge and livestock breeding)	Shanghai, Jiangsu, Zhejiang	Biogas projects using human feces, straws and animal waste	Involuntary Resettlement Ability and willingness to pay of low-income population Rural participatory wastewater management (women's participation) If any She habitat is involved in the Zhejiangsub-project area, an EMDP will be prepared.	OP4.12 OP4.10

5. Environmental and Social Background of the Regions

Based upon the master project plan and project visions, the predominant geographic locations where the project activities take place would be Shanghai and part of cities in Jiangsu and Zhejiang. After the activities start, it is expected to reduce water, solid waste and land pollution, improve urban and rural infrastructure, strengthen government supervision and raise public awareness for the conservation of the environment. In general, a positive outcome is anticipated.

5.1 Regional Environmental Baseline

5.1.1 Environmental Baseline of Shanghai Municipality

Shanghai is situated at 120°52' to 122°12' east longitude and 30°40' to 31°53' north latitude. Being a central point of China's east coastline where the Yangtze River and Huangpu River converge, the city lies on the west shore of the Pacific Ocean and in Asia's east coast. Bordering the provinces of Jiangsu and Zhejiang to the west, Shanghai is bordered on the north by the Yangtze River, on the east by the East China Sea, on the south by the Hangzhou Bay, and on the west by the provinces of Jiangsu and Zhejiang. It has a subtropical climate and experiences four distinct seasons – relatively short spring and fall, and long summer and winter. The climate is mild and humid, with abundant sunshine and rainfalls.

Shanghai sits on the edge of the Yangtze River estuary and in the east of Tai Lake basin. The rivers/lakes in this city have a surface area of over 500 square kilometers with a river surface area ratio of 9-10 percent. The total length of the rivers is over 20,000 kilometers and the drainage density reach 3-4 kilometers per square kilometers. The rivers, streams, lakes, and ponds in Shanghai all connect with each other. The major watercourses include Yangtze River estuary, Huangpu River and its branch Wusong River (also known as the Suzhou River), Wenzao Creek, Chuanyang Creek, Dianpu Creek, Daye Creek, Xietang Creek, Yuanxiejing Creek, Damaging Creek,

Tripura Creek, Lanlugang Creek, Jinjiang Creek, and Youdungang Creek etc.

Figure 5-1 Urban and Rural Planning Map of Shanghai Municipality (2017-2035)

On the List of Shanghai's Nature Reserves is the Nature Reserve of Acipenser Sinensis (Chinese Sturgeon) of the Yangtze River Estuary in Chongming County, Marine Nature Reserve of the Jinshan Islands in Jinshan District, National Nature Reserve of Jiuduansha Wetland in Pudong New Area, and Protected Drinking Water Source of Upstream Huangpu River.

According to Shanghai's Environmental Statement 2017, the air quality was stable and also improving but ozone pollution was increasing. The indicator like particulate matter 2.5 ($PM_{2.5}$) and nitrogen dioxide (NO_2) did not meet Class II limits of the national ambient air quality standard. The waters of Shanghai were becoming cleaner –out of all major watercourses, 23.2 percent met Class II to Class III limits, 58.7 percent met Class IV to Class V limits and 18.1 percent failed to meet Class V limit. The primary pollutants included ammonia nitrogen and total phosphorous.

5.1.2 Environmental Baseline of Jiangsu Province

Jiangsu province lies in the central area of China's coastal region and along the lower reaches of the Yangtze River and Huai River. As a key part of the Yangtze River Delta, Jiangsu is bounded by the Yellow Sea on the east, Shandong Province on the north, Anhui Province on the west, and Shanghai and Zhejiang on the southeast. Its geographic range starts from 116°18′ to 121°57′ east longitude and 30°45′ to 35°20′ north latitude.

Figure 5-2 Administrative Zoning Map of Jiangsu Province

The predominant topography of Jiangsu is an alluvial plain with a surface area of over

70 thousand square kilometers, covering over 70 percent of Jiangsu's land area. Jiangsu is also low-lying and flat with abundant lakes. The plain and waters account for over 90 percent of the total area of Jiangsu.

The main water resources in Jiangsu Province are rivers and lakes. There are big lakes like Tai Lake (also known as "Lake Tai" or "Lake Taihu"), Hongze Lake, Gaoyou Lake, Luoma Lake, Baima Lake, Shijiu Lake and Weishan Lake and rivers like Dayun River, Huaishu River, Chuanchang River, Guan River, Yan River, Tongyu Canal, Irrigation Canal and Tongyang Canal, which all connect and join with each other.

Falling within a transitional zone between the temperate climate zone and subtropical climate zone, Jiangsu has a mild climate with moderate rainfall and four distinct seasons. Spit by Huai River and North Jiangsu Irrigation Canal, the northern Jiangsu is situated in the temperate zone with a humid and semi-humid monsoon climate; and the southern Jiangsu is situated in the subtropical zone with a humid monsoon climate.

The nature reserves in Jiangsu province include National Nature Reserve of East Hongze Lake Wetlands, Yancheng's Nature Reserve for Rare Birds and Dafeng's Nature Reserve for Milu (Pere David's Deer) etc.

According to Jiangsu's environmental statement 2017, the compliance rate of air quality in 13 cities ranged from 48.2 percent to 79.2 percent and the concentration of key air pollutants decreased but the emissions of $PM_{2.5}$, PM_{10}, Ozone and nitrogen dioxide (NO_2) were sometimes still above limits; water quality was stable with an improved compliance rate of the major watercourses, and a low level of eutrophication was found in Tai Lake; over 90 percent of soil met quality standard and slight levels of the pollutants were found in soils, including inorganic pollutants like nickel, cadmium, mercury, lead and arsenic and organic pollutants like polycyclic aromatic hydrocarbons (PAHs) and Dichlorodiphenyltrichloroethane (DDT). The soil quality refers to the secondary standard of Soil Environmental Quality Standard (GB15618-1995), and the compliance rate is 90.2%. Among the over-standard points,

the points of light pollution, mild pollution, moderate pollution, and heavy pollution accounted for 8.5%, 0.5%, 0.4%, and 0.4%, respectively.

Biodiversity of the main rivers was increasing whereas that of benthic animals reduced; there were increased cross-provincial-border transports of hazardous waste and more were transferred out of Jiangsu.

5.1.3 Environmental Baseline of Zhejiang Province

Zhejiang, an eastern coastal province, is located at 27°12’ to 31°31’ north latitude and 118 ° to 123 ° east longitude. It is bordered by the East China Sea to the east, Fujian Province to the south, Jiangxi Province and Anhui Province to the west, and Shanghai and Jiangsu Province to the north.

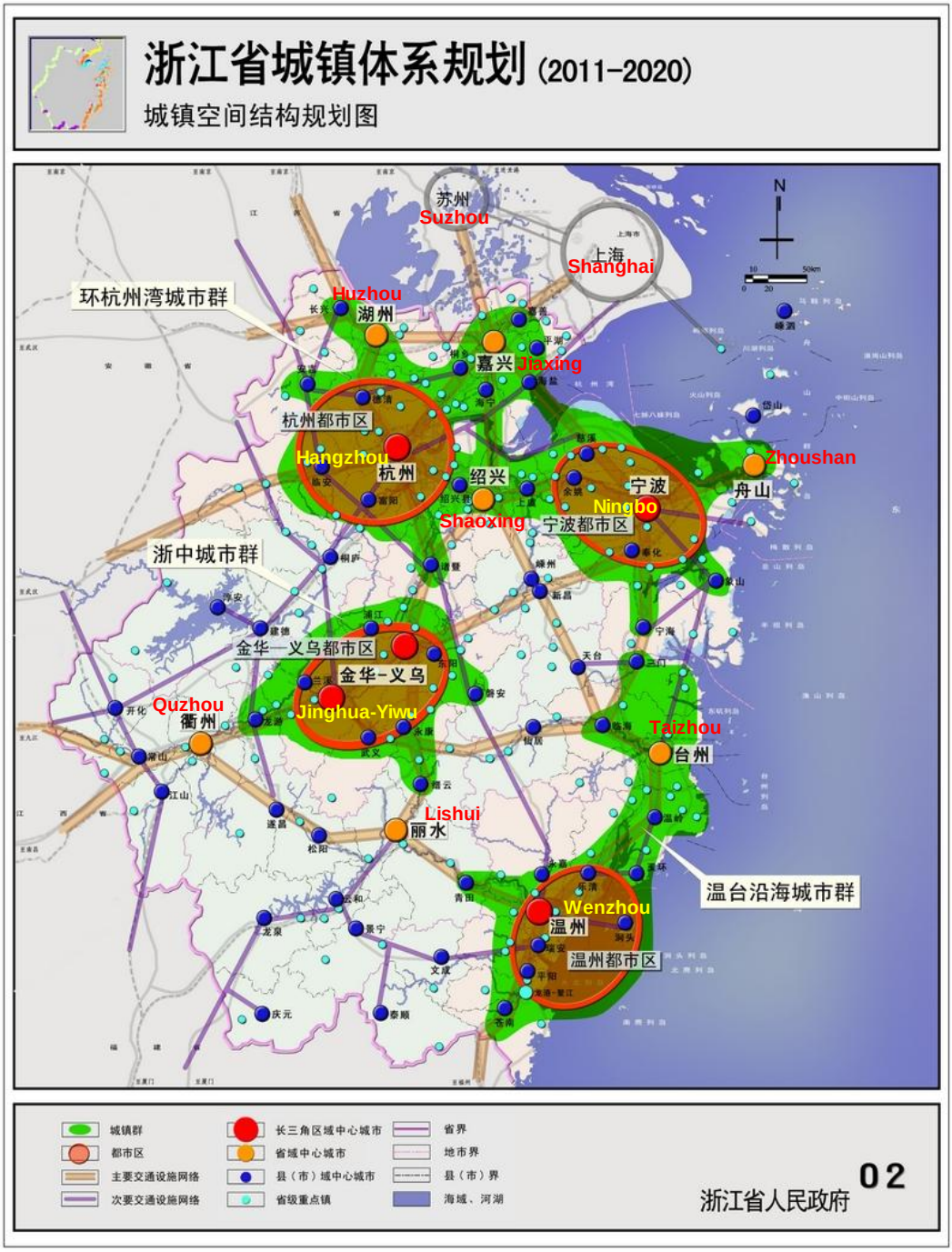

Figure 5-3 Urban Planning Map of Zhejiang Province (2011-2020)

Sloping from southwest to northeast, Zhejiang consists mostly of mountains in its southwest portion, hills in the middle, and low and flat alluvial plains in the northeast portion.

Zhejiang has a subtropical monsoon climate, featuring a monsoon season, distinct seasons, mild temperature, abundant sunshine and rainfalls, and humidity. The temperature and rainfalls change in parallel and weather hazards are frequently seen.

There are over 30 lakes in Zhejiang, each with a capacity of over one million cubic meters like Xi Lake and Dongqian Lake. The coastline extends over 6,400 kilometers. Eight main watercourses are flowing across Zhejiang, which, from north to south, include Tiaoxi River, the Grand Canal (Zhejiang section), Qiantang River, Yong River, Ling River, Ou River, Feiyun River, and Ao River. Out of the eight rivers, Qiantang River is the biggest. The rivers, except Shaoxi River and the Great Canal, all run into the ocean ultimately.

There are ten nature reserves in Zhejiang, including the Dapanshan National Nature Reserve, Fengyangshan-Baishanzu National Nature Reserve, Gutianshan National Nature Reserve, Jiulongshan National Nature Reserve, National Marine Nature Reserve of Nanji Archipelago, Qingliangfeng National Nature Reserve, Tianmushan Biosphere Reserve, Wuyanling National Nature Reserve, Jiushan Islands National Nature Reserve, and National Nature Reserve of Changxin Geological Relics.

Zhejiang's environmental statement in 2017 indicated that, the main streams of the rivers were in good quality but some branches and sections of the rivers flowing across towns were polluted to a certain extent; water quality of reservoirs met Class II limit and were considered good while that of lakes was relatively poor – for example, West Lake and Dongqian Lake in Class III, Jian Lake in Class IV and South Lake in Class V; some lakes were eutrophicated and reservoirs had medium-level nutrients, with the primary water pollutants like nitrogen, phosphorous and five-day biochemical oxygen demand (BOD_5); air quality was gradually improving and more than half of the cities in Zhejiang met Class II limit; the primary air pollutant was $PM_{2.5}$; soils in the main agricultural lands were in good and stable quality.

5.2 Regional Socioeconomic background

By the end of 2016, the total population of Shanghai, Zhejiang and Jiangsu provinces was 24.19 million, 55.9 million and 799.86 million, of which the female population was about 50%. There is no minority habitat in Shanghai and Jiangsu, while there are She habitats in Zhejiang. The 18 She Xiangs in Zhejiang have a total population of

162,568, including a She population of 36,368.

Shanghai, Zhejiang, and Jiangsu are developed regions in China, in which Shanghai has the highest per capita GDP, income and expenditure, followed by Zhejiang and Jiangsu. See Table 5-1.

At the end of 2015, there was no absolute poor population (annual per capita income below 4,000 yuan) in Shanghai, Zhejiang, and Jiangsu. At the end of 2016, Zhejiang had the largest urban MLS population of 223,000, while Jiangsu had the largest rural MLS population of 972,000.

Table 5-1 Socioeconomic Profile of Shanghai, Zhejiang, and Jiangsu (2016)

Indicator	Shanghai	Zhejiang	Jiangsu
1. Land area (km^2)	6 340.50	104795	107200
2. Gross population (0,000)	2 419.70	5590.00	7998.60
1) Agricultural population	256.67	1844.70	2581.95
2) Urban population	2163.03	3745.30	5416.65
3) Female population	1219.53	2431.62	3951.31
Proportion of females	50.4%	48.7%	49.4%
4) Minority population	27.58	121.47	38.49
3. GDP (00m yuan)	28 178.65	47251.36	76086.17
1) Primary industries	109.47	1965.18	4077.18
2) Secondary industries	8 406.28	21194.61	33550.54
3) Tertiary industries	19 662.90	24091.57	38458.45
4. Per capita GDP (yuan)	116 562	84916	95257
5. Per capita income and expenditure (yuan)			
1) Per capita disposable income	54 305	38529	32070
2) Per capita nonproductive expenditure	37 458	25527	22130
3) Per capita disposable income of urban residents	57 692	47237	40152
4) Per capita nonproductive expenditure of urban residents	39 857	30068	26433
5) Per capita disposable income of rural residents	25 520	22866	17606
6) Per capita nonproductive expenditure of rural residents	17 071	17359	14428
6. Poor population			
1) Urban MLS population (0,000)	16.82	22.3	20.5
2) Urban MLS standard (yuan/month/person)	880	739	647
3) Rural MLS population (0,000)	3.38	59.2	97.2
4) Rural MLS standard (yuan/month/person)	880	730	611

Source: statistical yearbooks 2017; the 6th national census in 2010; websites of social security bureaus

6. Environmental Management Procedures of Sub-projects

6.1 Environmental Management Procedure

This chapter is to guide the environmental management during the sub-project life cycle. The following steps will be followed to manage the environmental aspects of the sub-projects financed by the FSC. Among others, Step 1 takes place at the subproject identification stage, Step 2- Step 5 are to be implemented during subproject preparation and Step 6 is to support the environmental management during subproject implementation. It should be noted that Step 4 on stakeholder participation should be conducted on an ongoing basis throughout the subproject lifecycle, including the implementation stage.

Step6: Implementation, supervision, and monitoring of sub-project environmental and social management plan.

- Step 1- Environmental risk screening and due diligence: The sub-borrower should identify potential environmental impacts of the sub-project before loan application and fill out the Environmental Safeguards Screening Checklist and submit it to the FSC for review along with the loan application. During sub-project screening, the FSC will conduct due diligence on the potential sub-borrowers to avoid risks and improve investment efficiency. Based on the results of due diligence and screening, the FSC will give priority to the investments with obvious environmental and social benefits and select only the sub-projects with environmental eligibility.

- Step 2- Risk Classification and determination of EIA requirements: The environmental experts in the external expert group should assist the International Business Department (including a safeguard team) of the FSC to review the received screening checklist, determine the environmental risk level and EIA requirements of selected sub-projects and report to the World Bank for filing and spot checks.

- Step 3- Development of EIA documents: At this stage, the sub-borrower or its entrusted consulting agency should get the required environmental safeguard documents prepared and cleared following the ESMF requirements.
- Step 4- Disclosure and public participation: The sub-borrower takes the responsibilities to conduct meaningful public consultation and information disclosure throughout the subproject lifecycle, from EIA preparation to sub-project implementation. The EIA documents will be disclosed to different stakeholders for comments.
- Step 5- Review and approval of EIA documents: The FSC should engage its own environmental experts or the external expert panel to review and approve the environmental safeguard documents and submit them to the World Bank for filing and spot check. The environmental management plan prepared in accordance with this framework will be submitted by sub-borrower to the FSC for permission, within three months before the project implementation (the safeguard documents should be supplied within 1.5 months in advance according to the complexity of the sub-project). No implementation or loan disbursement is allowed without permission;
- Step 6- Implementation supervision and monitoring of sub-project Environmental Management Plan (EMP): The sub-borrower is responsible for the implementation of sub-project EMP; an independent monitoring agency will be engaged to conduct external environmental monitoring with regular reporting to the FSC. Relevant reports will be submitted to the World Bank for review and filing. Upon sub-project completion, the sub-borrower should prepares the environmental completion report and submit to the FSC for review.

6.2 Environmental Screening and Due Diligence of Sub-projects

As the first step of environmental management procedure, environmental screening and due diligence will be conducted during the identification of sub-projects. The

screening results will identify sub-projects eligible for project financing to proceed with preliminary screening of environmental impacts.

6.2.1 Environmental Screening

Along with the loan application, the sub-borrower should complete the environmental and social screening form in Annex E1 of the ESMF. With the supports of environmental experts, the FSC will conducted environmental screening to exclude any investment on the negative list (Annex E3 of the ESMF) based on the completed form. The FSC will give priority to the investments with significant environmental and social benefits and select only the sub-projects with environmental eligibility.

The FSC will establish green criteria for sub-project screening to demonstrate the environmental benefits of selected sub-projects beyond minimum safeguards compliance requirements as defined in the ESMF. The FCS will review the Chinese national benchmarking of environmental performance in targeted sectors (water treatment, solid waste management and soil remediation) and select one or two representative environmental indicators in each sector to define the quantified “green” targets for this Project during sub-project screening. The green criteria will be updated routinely and as shown in Appendix E7.

6.2.2 Environmental Due Diligence

After the initial environmental screening, environmental due diligence will be conducted for the sub-projects to review the environmental compliance records of enterprises as potential sub-borrowers. The FSC should conduct due diligence on the current and past environmental performance of the sub-borrowers, including but not limited the following:

1) Exclusion of any enterprise with records of non-compliance against national laws and regulations.

2) Desk review of environmental compliance documents for potential sub-borrower, such as operation permits, pollutant discharge permit and environmental

approval.

3) Review of daily environmental performance during operation, such as compliant wastewater discharge, occurrence of major environmental pollution incidents, records of environmental complaints from residents, the media or civil societies, etc.

4) Investigation on soil, groundwater and other pollution within current premise of the enterprise.

5) When reviewing past environmental performance of the potential sub-borrowers, possible gaps between past operating standards of the enterprise and the World Bank's safeguards policies should be considered to ensure the confidence that the World Bank's safeguards requirements can be delivered if the decision to proceed with the investment is taken.

6.3 Risk Classification and Determination of EIA Requirements

The sub-borrowers (i.e. government or enterprise) will need to categorize the sub-project-related environmental risks in accordance with the ESMF and submit the initial results to the FSC. The FSC and its external experts will review and confirm the screening results submitted by the sub-borrowers to determine the environmental and social risk category and to determine the requirements for environmental and social safeguards documents preparation. The results of risk classification and EIA requirements will be reported to the World Bank for filing and spot-check.

During the implementation of the co-financing loan, the FSC will determine the environmental risk classification (Category A, Category B and Category C, as shown in Table 6-1) and the requirements of environmental safeguards documents for subprojects based on their exact locations, activities and screening results. The FSC will invest the sub-projects with significant environmental and social benefits.

Table 6-1 Environmental Classification of Sub-projects

Project Risk Rating	Environmental impacts	Project examples	Assessment requirements	Requirements of environmental Safeguard documents
Category A	Significant adverse environmental impacts are likely to be caused by the projects, which are sensitive, diverse or unprecedented. The impacts might be also found beyond the sites.	Large-scale waste landfills or large-scale wastewater treatment plants	A full and comprehensive environmental impact assessment is required for Category A project	Environmental impact assessment document and environmental management plan will be prepared in accordance with the World Bank's policies as shown in Appendix E2. Additionally, the items relating to physical cultural resources handling procedures must be incorporated in all standard terms of the contract.
Category B	The adverse impacts of the projects on the environment are considered limited, in terms of the scope and degree of influence, and can be reduced through advanced technology and straightforward mitigation measures.	-	No full environmental impact assessment is required, but some type of environmental impact assessment or review based on project and environmental characteristics	Environmental impact assessment or simplified environmental impact assessment (in accordance with China's regulations) and/or environmental management plan (in accordance with the World Bank's policies) will be prepared.
Category C	Minimal or no adverse impacts occur.	-	No environmental impact assessment or review required in this case.	No environmental safeguard documents are required, but environmental impact registration per China's legislation.

6.4 Development of Environmental Safeguard Documents for Sub-projects

The environmental safeguard documents (refer to Table 6-1 for the requirements on environmental safeguard documents) will be prepared by the competent and qualified environmental specialists or third-party consultants engaged by the sub-borrowers in line with project risk classification. If the subsequent sub-projects need to be supplemented, the sub-borrower shall make necessary improvements according to the specific environmental and social problems of the sub-projects.

6.5 Disclosure and public participation for the Sub-projects

Disclosure and public consultation will be conducted in accordance with OP 4.01. The key information like the environmental impact assessment work procedure and the full text of the environmental impact assessment report made publicly available includes the background of the sub-projects, environmental assessment process flows, conclusions and the channels to obtain the reports. The reports could be provided in the electronic version or in hard copies to the stakeholders of the sub-project. Disclosure announcement can be made on the website, in a newspaper or posted on site. The public consultation will be conducted via questionnaires, site visits, and seminars. It is recommended to make the environmental documents available to the public for at least 14 days.

Sub-project implementer will undertake disclosure and public consultation. The relevant records should be submitted to FSC for documentation, together with environmental and social management documents.

6.6 Review and Approval of Environmental Safeguard Documents of the Sub-projects

Each sub-project implementer will submit the environmental impact assessment document (environmental impact assessment report/environmental impact assessment

form/environmental impact registration form) to the local environmental authorities and obtain the approval. The first sub-project in each sector will be subject to Bank prior review and clearance to ensure the appropriateness of ESMF implementation and E&S risk management by FSC at the startup stage. If the first project is Category B, then the first Category A sub-project in that sector will also be subject to prior review. The Bank will retain the right of prior review and clearance of Category A sub-projects until the FSC can demonstrate its capacity to manage safeguards issues on its own, which based on the experience of previous APLs is expected to be on a limited number of sub-projects.

The environmental management plan prepared in accordance with this framework will be submitted by sub-project implementer to FSC for permission, within three months before the project starts (the safeguard documents should be supplied within 1.5 months in advance according to the complexity of the sub-project). No implementation is allowed without permission.

6.7 Implementation, Supervision and Monitoring of the Sub-projects

6.7.1 Implementation

The sub-project implementer will be responsible for executing environmental action plans. For the sub-projects involving subcontractors or constructors, the sub-project implementer should incorporate relevant environmental management measures in the tender documents and construction contracts, to make sure the subcontractors will take actions.

During the implementation of the sub-project, if unresolved or significant environmental and social risk impacts are found. The sub-borrower shall promptly negotiate with the relevant person in charge of the environmental protection business department of the World Bank for a limited period of time. The general term is three months, and if the overdue period is not resolved. The FSC has the right to adopt sanctions, including but not limited to suspending the payment of funds, shortening the repayment period, raising the next repayment rate, and pulling in the credit

blacklist. Sanctions for breach of contract will be included in the cooperation framework agreement with the sub-borrower.

6.7.2 Supervision and Monitoring

The sub-project implementer or external experts or consultants recruited will be responsible for supervising the implementation of the action plans. FSC or external experts will check on a routine basis and the World Bank will perform a spot check.

The sub-project implementer will submit a progress report to FSC every half a year, for review and documentation by FSC's World Bank functional department.

The process report should provide the details about the implementation of environmental management documents, which mainly include:

1) Project progress,
2) Implementation of the environmental impact and response measures,
3) Environmental impact key indicators compliance,
4) Sub-borrower commissioned third-party environment Environmental monitoring report prepared by experts/consulting agencies.

6.8 Grievance Redress Mechanism (GRM)

The Grievance Redress Mechanism (GRM) provides a solution to the affected individuals and group who would express their thoughts and opinions rationally and clearly. The mechanism includes 1) documentation and reporting system for oral and written grievance; 2) existing complaint channel in the governments and stakeholders of the sub-projects, and 3) time-frame to settle a grievance. More details will be provided in the environmental management documents of the sub-projects.

During the implementation stage, monitoring and evaluation of the mechanism will be conducted on a routine basis. The establishment of the mechanism will facilitate FSC to perform a routine monitoring and evaluation of the efficiency and effect of the complaint and grievance proposing progress of the sub-project implementers.

7. Social Management Procedures of Sub-projects

7.1 Main contents of Social Management

7.1.1 Implementation Procedure of Social Management

The procedure is as follows:

- Step 1- Identifying potential social risks of the Project before applying for the loan, screening potential social safeguards and impacts (social risks, social sustainability, and social conflicts) according to the PRC and Bank policies, and submitting to FSC;
- Step 2 -The FSC Bank Operations Dept. (governing the Environmental and Social Safeguard Team) review the screening table together with the Investment Operations Dept., Compliance and Risk Control Dept., and social experts to determine sub-projects and social safeguard requirements, and submitting to the Bank for reference;
- Step 3 - Preparing terms of reference (TORs) for the social safeguard documents;
- Step 4- Review and approval of the TORs by FSC or the social experts;
- Step 5- Preparing social safeguard and SA documents, and conducting discussion and disclosure, it is suggested to complete the safeguard documents within 2 months according to the complexity of the sub-projects;
- Step 6 - Approval of safeguard documents;
- Step 7 - Implementation, supervision, monitoring, and evaluation
- Step 8 - Preparing completion reports, and submitting to FSC for review and then to the Bank for reference

7.1.2 Screening and Identification of Social Risks

The PMO will screen social safeguard policies based on the Bank’s social safeguard policies and the SMPF 6 months before project implementation, and submit the

screening results to FSC; FSC or the social experts will review the screening results, and submit them to the Bank for reference.

Social impact screening includes: 1) necessity of LA (if any), and involuntary resettlement (permanent and temporary); 2) affected population; 3) impacts on minority residents, and 4) if there is any other social risk. The PMO will use the screening tools given in Appendix S1 to identify such impacts, and the SA and social safeguard documents to be prepared.

7.1.3 Preparation of Social Management Documents

The social safeguard documents of the Project depend on its impacts:

- RAP: If more than 200 persons are affected by LA and HD, a RAP should be prepared, otherwise an ARAP should be prepared.
- SA Report: If any major social impact is expected to arise, such as NIMBY, poverty, women's participation, and unemployment, an SA report should be prepared.
- EMDP: If the Project involves any minority habitat, an EMDP will be prepared to ensure that minority residents benefit in a culturally adaptive manner, their cultures are respected, and negative impacts on them are mitigated.

In addition, consideration should be given to social gender during project preparation and implementation. Social fairness and gender equality will be promoted through extensive, equal participation, and consultation with local enterprise managers and workers (including affected local female workers). Particular attention should be paid to the participation of ethnic minorities and vulnerable groups (including women). Sensitivity to social issues should be maintained during LA, resettlement, and employment assistance for enterprises (if any). Equal participation and social gender sensitivity will be reflected in project activities, such as capacity building, consultation, compensation, and livelihood restoration.

7.1.4 Preparation and Review of TORs

After the social safeguard screening has been completed, the PMO will submit a full

safeguard screening table and required social safeguard documents to the Bank for review.

After the social impacts or risks identified are confirmed by FSC, the PMO or social experts will prepare TORs for the social safeguard documents according to the Bank's social safeguard policies and submit them to FSC for approval.

7.1.5 Preparation of Safeguard Documents, Negotiation and Disclosure

Once the screening and documentation requirements are accepted by FSC, the PMO or social experts will prepare detailed safeguard documents.

For any sub-project requiring the RAP, EMDP and SA Report, consultation will be conducted at least twice at the preparation stage. The scope of social issues will be identified at the beginning of the preparation of the safeguard documents, and consultation on preliminary results conducted before the finalization of the safeguard documents.

The information to be disclosed should at least include the design and impacts of the component and recommended mitigation measures. At the design and implementation stages, the above information should be updated and reported to stakeholders. Multiple disclosure modes may be used, possibly including poster, brochure, newspaper, Web and community meeting. Before the consultation, all safeguard documents should be disclosed at public places accessible for APs and other stakeholders to lay a foundation for meaningful consultation. The disclosure and consultation mechanism should be planned and specified in the relevant safeguard documents. The approved social safeguard documents should be disclosed to the public 30 days before project approval.

7.1.6 Approval of Safeguard Documents

The local PMOs should review and approve the social safeguard documents in accordance with the domestic regulations. 3 months before project implementation, the social safeguard documents should be submitted to FSC for approval and to the Bank for reference (The World Bank will review the first sub-projects (totally three,

the first one for each sector, respectively water treatment, solid waste management and soil remediation). A sub-project should not be implemented before its social safeguard documents are approved. The RAP, SA Report and EMDP should have been reviewed and approved by the Bank's social experts before the Project is approved.

7.1.7 Complaint and grievance redress mechanism

If any affected individual or organization thinks that it is not properly treated under the Project, a grievance redress mechanism is necessary, including 1) a recording and reporting system, including written and oral appeals; 2) handled by persons designated by local governments; and 3) restriction on appeal handling time. This mechanism will be specified in the relevant safeguard documents. During implementation, the PMO will perform regular M&E on the operation of this mechanism.

7.1.8 Implementation, Supervision, Monitoring and Evaluation

1) Implementation

The PMO is responsible for the implementation of the safeguard measures at the implementation stage.

2) Supervision

The PMO or social experts is/are responsible for the implementation of the actions related to social safeguard. FSC or the social experts and the Bank will visit the project area regularly during implementation for the purpose of:

- Directing and assisting in the preparation of the safeguard tools;
- Reviewing screening results, reports and safeguard documents; and
- Supervising the implementation of the safeguard tools to ensure that they comply with the Bank's policies.

3) M&E

The PMO will appoint qualified, experienced consultants, to perform M&E to obtain

key social information on the components and information on the effectiveness of the mitigation measures. For any component requiring a RAP, the PMO will appoint third party independent consultants accepted by the Bank to perform external M&E on the implementation of the RAP. External M&E reports will be submitted to FSC and the Bank.

7.2 SA Policy Framework

7.2.1 Purpose of SA

The purpose of SA is to improve the project design and implementation through extensive participation and consultation so that individuals and groups that may be affected by project activities, especially women, the poor and other vulnerable groups participate in and support the Project, social risks are reduced, and the project objectives are fulfilled.

Except for conventional social impact analysis in environmental impact assessment, if the Project may have any major social risk (environmental NIMBY, shanty area reconstruction, polluting enterprise closedown, etc.), the PMO should conduct an SA and prepare an SAP.

7.2.2 Methods of SA

Qualitative methods such as literature review, interview and FGD, and quantitative methods such as sampling questionnaire survey and structured interview are usually used in SA.

- Literature review: collecting socioeconomic data, relevant policies, LA and HD compensation rates, ethnic annals, etc.
- Questionnaire survey: designing a questionnaire based on the project scope, and conducting a survey on APs
- FGD: involving primary stakeholders, such as APs, vulnerable groups, and government officials, to learn their attitudes to, needs for and suggestions on the Project, and ability and willingness to pay
- In-depth interview: interviewing APs in a semi-structured manner to learn their attitudes to, needs for and suggestions on the Project
- Key informant interview: interviewing government and village officials to learn their attitudes to and comments on the Project, and provide inputs into the SMPF

7.2.3 Scope of SA

As necessary, the SA Report will include the following:

- Stakeholder analysis: identifying primary stakeholders, and analyzing their needs for and attitudes to the Project, especially women and the poor
- Information disclosure and public participation: disclosing the project design and information, the Bank's social safeguard policies, state and local compensation and employment policies, grievance redress mechanism, scope and modes of participation, attitudes to and suggestions on policies and plans, especially how vulnerable groups participate in and benefit from the Project
- Social gender impacts: learning local women's attitudes to and comments on the Project, potential impacts of the Project on women, women's employment and social security, needs for suitable jobs, women's perceptions of the Project, special measures, and monitoring indicators
- Social impact analysis: analyzing potential positive and negative social impacts of the Project on different stakeholders, thereby identifying, controlling and avoiding social risks effectively

7.2.4 Preparation and Implementation of the SAP (including the GAP)

A feasible SAP (including the GAP) has been developed based on the identified social risks, as shown in Appendix S4, including specific measures, implementation time, agencies, budgets, funding sources and monitoring indicators (at least one social gender indicator to benefit residents, promote social fairness and inclusiveness, and realize the social objectives of the Project. Sensitivity to social gender should be considered in SAP.

The SAP specifies agencies responsible for social actions, which should participate in SAP preparation, and learn their duties and funding sources.

7.3 Resettlement Policy Framework

7.3.1 Purpose of the RPF

Since the Project may involve LA and involuntary resettlement, the borrower has prepared the RPF, and related principles and guidelines in accordance with the Bank's policy OP4.12 to guide resettlement activities.

7.3.2 Objectives of the RPF

This RPF is based on OP4.12 "Involuntary Resettlement" in the World Bank Operational Manual issued in December 2001, and the overall objectives are:

- Involuntary resettlement should be avoided where feasible, or minimized, exploring all viable alternative project designs;
- Where it is not feasible to avoid resettlement, resettlement activities should be conceived and executed as sustainable development programs, providing sufficient investment resources to enable the persons displaced by the project to share in project benefits;
- Displaced persons should be assisted in their efforts to improve their livelihoods and standards of living or at least to restore them, in real terms, to pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher.

The key principles and objectives of this RPF are as follows:

- Acquisition of land and other assets, and related resettlement should be minimized where possible;
- As of the baseline survey data, all APs are entitled to restoration measures to help them improve or at least their living standard, ability to earn income and production level; the lack of legal title to asset losses does not impede their entitlement to resettlement measures;
- The resettlement measures available include: (1) residential houses and other

buildings are compensated for at replacement cost-free from depreciation or recovery of residual value; (2) cash or other means of compensation, such as land replacement and endowment insurance; (3) equal replacement of housing and housing sites acceptable to APs; and (4) subsidies for relocation and living;

- If APs can accept the replacement of housing, housing sites, and farmland, replacements should be as close to their lost land as possible;

- The transition period of resettlement should be minimized, and restoration measures should be made available to APs at the project site before the preset starting date;

- The acquisition plan of land and other assets, and the restoration measures offered shall be negotiated with APs repeatedly to ensure minimum interference; APs will be empowered before the preset starting date;

- The existing community service and resource levels should be maintained or improved;

- Whenever and wherever necessary, financial and material resources for resettlement and restoration must be available; the budget in the RAP should include contingencies;

- The institutional and organizational arrangements should ensure that assets and resettlement are designed, planned, consulted and implemented effectively and timely;

- The implementation of the RAP shall be supervised, monitored and evaluated effectively and timely.

7.3.3 RAP Preparation and Approval

The preparation and implementation of the RAP (including the payment of all resettlement costs) will be the responsibility of the PMO and reported to FSC for review at least one month before RAP implementation. Compensation, resettlement, and restoration will not begin until FSC has accepted the RAP, and should be

completed by the commencement of civil works construction.

Each RAP should be based on identifiable basic information collected, and include the following aspects:

- Those whose farmland or rural houses together with housing sites is/are wholly or partly affected by the Project (permanently or temporarily);
- Urban houses wholly or partly affected by the Project (permanently or temporarily);
- Commercial facilities (enterprises and stores) wholly or partly affected by the Project (permanently or temporarily);
- Young crops and ground attachments wholly or partly affected by the Project (permanently or temporarily).

When the affected population of a component exceeds 200, the PMO will prepare a RAP as shown in Appendix S2, which includes the following (if relevant):

- General description of the Project;
- Identification of potential impacts of the Project;
- Objectives (the main objectives of the resettlement program);
- Socioeconomic studies: The findings of socioeconomic studies to be conducted in the early stages of project preparation and with the involvement of potentially displaced people;
- Legal framework: The findings of an analysis of the legal framework, covering the scope of the power of eminent domain and the nature of compensation associated with it, the applicable legal and administrative procedures, environmental laws and social welfare legislation, laws and regulations, and any legal steps necessary;
- Institutional framework: covering the identification of agencies responsible for resettlement activities and NGOs that may have a role in project implementation; an assessment of their institutional capacity, and any steps that are proposed to enhance

their institutional capacity;

- Eligibility: Definition of APs and criteria for determining their eligibility for compensation and other resettlement assistance;
- Valuation of and compensation for losses;
- Resettlement measures: a description of the packages of compensation and other resettlement measures;
- Resettlement site selection, preparation, and rearrangement;
- The offering housing, infrastructure, and social services;
- Environmental protection and management;
- Public participation and consultation, where the APs and the related communities must be included;
- Integration with host populations: measures to mitigate the impact of resettlement on any host communities;
- Grievance procedures: affordable and accessible procedures for the third-party settlement of disputes arising from resettlement;
- Organizational responsibilities;
- Implementation schedule;
- Costs and budget;
- M&E.

When the affected population of a component does not exceed 200, the PMO will prepare an abbreviated resettlement action plan (ARAP), which at least includes the following:

- a census survey of APs and valuation of assets;
- description of compensation and other resettlement assistance to be provided;

- consultations with displaced people about acceptable alternatives;
- institutional responsibility for implementation and procedures for grievance redress;
- arrangements for monitoring and implementation; and
- a timetable and budget.

7.3.4 Institutional and Legal Framework

The legal framework guiding the implementation of the RAP is based on the Bank's policy on involuntary resettlement (OP4.12), the applicable laws, regulations, and ordinances of the state, and the project provinces and cities.

The PRC has developed a complete legal framework and policy system on LA, HD, resettlement, and compensation, including the Land Administration Law of the PRC (amended on August 28, 2004). Within the state legal and policy framework, local governments have promulgated relevant local regulations and policies to manage and direct local LA, HD, resettlement and compensation work. The provincial and local governments have promulgated local regulations and policies in accordance with the applicable state laws and policies to manage and direct relevant local work. See Appendix S5.

According to the Notice of the Ministry of Land and Resources on Doing a Better Job in LA Management (MLR [2010] No.238), "All localities shall establish a dynamic adjustment mechanism for compensation rates for land acquisition, adjust compensation rates for land acquisition every 2 or 3 years depending on economic level and local per capita income growth, and improve the compensation level for land acquisition gradually." The latest policies will apply in practice.

The purpose of preparing the RAP is to ensure that the APs have sufficient opportunities to replace their lost assets and improve or at least restore their income level and living standard. To realize this purpose, all APs should be identified, and it should be ensured that all APs think the remedies defined in the RAP are rational. In

consideration of the main types of impacts (e.g., LA, demolition of urban and rural residential houses, demolition of non-residential properties (enterprises, stores, etc.)), the following measures are usually taken:

APs losing farmland will be entitled to the following compensation and restoration measures:

- Land reserved for resettlement obtained through LA should be used to develop the collective economy with the consent of villagers, offer collective jobs for collective resettlement, generate operating income, etc.

- Where land reallocation is impossible, land-expropriated farmers must be identified. They will be provided with jobs with a remuneration level at least equivalent to their lost income, or receive a resettlement subsidy at 4-6 times the average annual output value (AAOV) of the acquired land in the 3 years before LA. If the former living standard of the APs still cannot be fully restored like this, resettlement subsidy may be increased to 15 times the AAOV.

- If land compensation fees and resettlement subsidy are still insufficient to restore the living standard of the APs, they will receive subsidies from fees on the use of state-owned land.

- Land compensation fees and resettlement subsidy will be paid to the affected village committees, and used to increase cultivated area if the land is available, to improve agriculture through irrigation, etc. and to develop nonagricultural income. Like fixed assets, affected young crops, fruit, and commercial forests will be compensated for a replacement cost.

- The lost income, young crops and infrastructure, and land restoration costs of the persons affected by temporary land occupation will also be compensated for.

- Eligible APs will be included in endowment insurance for LEFs or the social security system; and

- The APs will have priority in receiving job opportunities and skills training under

the Project.

Demolished houses and attachments will be compensated for as follows, and the following restoration measures will be taken:

- Supply of resettlement housing of equal value;
- Compensation at full replacement cost;
- Reconstruction or restoration of all affected facilities and services (e.g., roads, water and power supply, telephone, cable TV, schools);
- The subsidy during the transition period should ensure that all assets are relocated or temporary housing is obtained.

The RAP prepared should include an entitlement matrix for the APs. See Appendix S6 for a sample.

7.3.5 Differences between Bank and PRC Policies, and Solutions

Compensation for houses

- Difference: Bank policies require that compensation is based on replacement cost, while PRC laws think that depreciation is reasonable.
- Solution: All compensation rates of Bank-financed projects are based on replacement cost.

Compensation and resettlement of vulnerable groups

- Difference: Bank policies require that special compensation is granted to all vulnerable groups, especially seriously affected households faced with impoverishment. Chinese provisions do not require social analysis, and compensation is based only on the amount of loss.
- Solution: Special funds are available to assist the vulnerable groups, who will be identified during the DMS. All measures have been specified in the RAP.

Legal title

- Difference: Bank policies require all demolished houses, whether lawful or not, should be compensated for. According to Chinese laws, no compensation should be provided for the acquisition of illegally owned land and houses.

- Solution: For a Bank-financed project, all APs, whether lawful or not (before the cut-off date), whether having legal title or not, will be provided with compensation or assistance.

Resettlement monitoring, evaluation, and reporting

- Difference: Bank requires that internal and external resettlement monitoring be conducted. However, there is no such requirement in Chinese laws, expect for reservoir projects.

- Solution: Internal and external resettlement monitoring mechanisms have been established for all Bank-financed projects, and this has been included in the RAP.

7.3.6 Implementation Process

The RAP should include an implementation schedule for all activities to be conducted. If necessary, compensation payment, other entitlement restoration measures (in cash or in kind) and resettlement should at least be completed one month before LA. If full compensation is not paid or necessary assistance measures are not available before LA, a transition subsidy should be provided.

7.3.7 Financial Arrangements

The PMO will bear all costs related to LA and resettlement. Any RAP consistent with this RPF must include estimated costs and a budget. Whether identified as APs at the RAP preparation stage or not, and whether sufficient funds are available or not, all those adversely affected by LA and HD are entitled to compensation or any other appropriate relief measure. For the above reason, the budget in the RAP should include contingencies, which are usually 10% or more of the estimated resettlement budget in order to cover contingent resettlement costs.

The compensation rates specified in the RAP provide a basis for the calculation of

compensation fees for resettlement, which should be fully paid to individuals or collectives losing land or other assets and should not be deducted for any reason. A rationale is that the fund flow should be as direct as possible with minimum intermediate links.

7.4 Indigenous Peoples Policy Framework

7.4.1 Purpose of the IPPF

Since FSC-financed projects will cover central and western China, some minority habitats may be involved, and an Indigenous Peoples Policy Framework (IPPF) will be prepared.

This IPPF has been prepared in accordance with the applicable PRC laws and regulations, and the Bank's OP4.10 to ensure that affected minority residents receive social and economic benefits suited to their cultural customs, and measures are taken to avoid, minimize or compensate for negative impacts on minority residents.

7.4.2 Preparation and Approval of the EMDP

1) Identification and screening of ethnic minorities

The basis of identification: An "ethnic minority" means a unique, vulnerable social and cultural group with the following features to varying degrees:

- Self-identification as a member of a unique minority cultural group, and such a feature is recognized by others;
- Collectively attached to a geographically unique residential area or ancestral estate in the project area, and to the natural resources of such residential area or estate;
- Having traditional cultural, economic, social or political institutions different from mainstream society;
- Having a minority language different from the official language of the country or region.

Methods of identification: ①fieldwork—learning local population and ethnic composition, and identifying any minority village or habitat; ②data collection and literature review—collecting statistical yearbooks, reports, annuals and other literature reflecting local population, ethnic groups, culture, customs, etc. to learn production and living differences between ethnic minorities and the Han people

Screening: At the early preparation stage, the PMO will conduct screening to see if there is an ethnic minority in the project area or if any ethnic minority is attached collectively to the project area. In order to conduct screening, the Bank will engage qualified and knowledgeable social experts.

According to the social safeguards policy and social management framework of the World Bank, the sub-project implementing units (governments or enterprises) carry out the screening of social safeguards policies six months before the loan and submit the screening results to the FSC. The social experts in the FSC or the external expert group engage to review the results of the screening of social security policies of the project units. Determine the requirements for the preparation of social security documents and report them to the World Bank for recording and spotting check.

2) SA (factors to be included in SA in minority areas)

If, based on the screening, the FSC concludes that ethnic minority communities are present in（the first one for each sector needs to be confirmed by the Bank）, or have collective attachment to, the project area, the sub-project PMO undertakes a social assessment to evaluate the project's potential positive and adverse effects on the ethnic minority communities , and to examine project alternatives where adverse effects may be significant. The breadth, depth, and type of analysis in the social assessment are proportional to the nature and scale of the proposed project's potential effects on the ethnic minority communities, whether such effects are positive or adverse. To carry out the social assessment, the sub-project PMO engages social scientists whose qualifications, experience, and terms of reference are acceptable to the FSC.

- Reviewing the legal and institutional framework suited to minority residents on a scale appropriate to the Project;

- Collecting baseline information on the population, social, cultural and political features of affected minority communities, land and estates traditionally owned, used or occupied by them, and natural resources on which they rely;

- Identifying primary stakeholders, and drafting a detailed and culturally appropriate ethnic minority consultation procedure for all stages on the basis of the review results and the baseline information;

- Evaluating the Project's potential positive and negative impacts on the basis of free, prior and informed consultation with affected minority residents, and analyzing their relative vulnerability and potential risks;

- Determining and evaluating measures to avoid or minimize negative impacts based on free, prior and informed consultation with affected minority residents, and ensuring that minority residents benefit from the Project in a culturally suited manner

3) Consultation and participation

If the project affects the ethnic minority, the project units should have unrestricted prior informed consultation with them. To ensure such consultation, sub-project units need to:

(a) Develop appropriate gender-inclusive and intergeneration-inclusive frameworks to provide opportunities for consultation between borrowers, affected minority communities, minority organizations (if any) and other civil society organizations recognized by affected minority communities at all stages of project preparation and implementation;

(b)Adopt consultative methods, which are in line with the social and cultural values of the affected minority communities and local conditions, Pay a special attention to

minority women, youth and children and their access to and benefits from development projects when designing these methods;

(c) Provide information about all relevant projects to ethnic minority communities in a manner consistent with their cultural habits at all stages of project preparation and implementation (including the assessment of potential negative impacts of projects on affected ethnic minority communities).

4) EMDP preparation If the Bank finds that there is an ethnic minority in the project area or any ethnic minority is attached collectively to the project area, GFHG will conduct SA to evaluate the Project's potential positive and negative impacts on such ethnic minority and prepare an EMDP through consultation.

The PMO will determine if affected minority communities can provide extensive support to the Project based on SA, and free, prior and informed consultation. If such support is available, the borrower should prepare a detailed EMDP. As necessary, the EMDP will include the following as shown in Appendix S3:

- An information summary: reviewing a legal and institutional framework suited to minority residents on a scale appropriate to the Project; collecting baseline information on the population, social, cultural and political features of affected minority communities, land and estates traditionally owned, used or occupied by them, and natural resources on which they rely;

- A summary of free, prior and informed consultation: conducting such consultation at the preparation stage in minority communities for extensive community support;

- A framework document that ensures that free, prior and informed consultation is conducted with affected minority communities at the implementation stage;

- An action plan to ensure that minority residents receive culturally appropriate social and economic benefits, including measures to improve the capacity of the IAs if necessary;
- An appropriate action plan to avoid, minimize or compensate for potential negative impacts on minority residents;
- Budget and financing plan of the EMDP;
- An appropriate and understandable grievance redress procedure for minority communities, established by reference to common local judicial recourse and dispute settlement mechanisms;
- An appropriate EMDP implementation M&E and reporting mechanism, including arrangements made for free, prior and informed consultation with affected minority communities

5) EMDP approval

Before determining whether each relevant project or project is eligible for funding, the project implementation unit shall submit the minority plan of the project promised by the local government to the environmental protection service for review one month before the project is implemented. After the review and approval, the relevant projects or projects can be truly implemented. Approved minority development plans must be publicized prior to implementation through local newspapers or government websites. The FSC will submit the approved minority development plan to the World Bank for filing or spotting check.

7.4.3 Prevailing IPPF

The EMDP should be prepared in accordance with the applicable state and provincial laws and regulations, and the Bank policy on indigenous peoples (OP4.10 and BP4.10). See Appendix S7 for the policy framework.

Both PRC and Bank policies have the same goal in respect of ethnic minorities, namely fully respecting their dignity, power, economy, and culture, promoting their

equality and development, and paying special attention in their economic, social and cultural development to protect their rights and interests, and improve their social and economic status.

Both PRC and Bank policies lay stress on the public participation of minority communities, and the action plan across all stages, the provision of all relevant information in a culturally appropriate manner, and the collection of comments, attitudes and expectations of minority residents to win their extensive support.

Both PRC and Bank policies emphasize that a series of measures be taken to ensure that affected minority residents receive social and economic benefits suited to their cultural customs, and measures are taken to avoid, minimize or compensate for negative impacts on minority residents.

7.4.4 Implementation Process

The EMDP should propose a specific implementation schedule for all required activities, appoint agencies responsibly, and fix funding sources. At the implementation stage, the PMO will be responsible for the implementation of the EMDP and take appropriate measures to enhance the Project's positive benefits and mitigate its negative impacts.

7.4.5 Financial Arrangements

Funds needed for the implementation of the EMDP will be from the budget, government finance, special funds of competent authorities and publicly raised funds.

7.4.6 Public Participation and Complaints

Unrestricted prior informed consultations on affected sub-projects and affected communities are required throughout the sub-project cycle. See chapter 8.

7.4.7 Monitoring and Evaluation

Includes internal and external monitoring. See chapter 7.5.

7.5 Monitoring and Evaluation

7.5.1 Internal monitoring

The internal monitoring is carried out by the sub-borrower. The sub-borrower needs to appoint a special social management commissioner to be responsible for collecting and sorting out information related to social management in a timely manner, and forming two internal monitoring reports each year, reporting it to step by step. The FSC analyzes the internal monitoring situation every half year and checks the implementation progress and implementation process of the social management plan, resettlement plan (if any), minority development plan (if any).

Sub-borrower prepares a progress document every half year (deadlines: August 31st and February 28th every year) and submits it to the FSC; FSC summarizes (deadlines: September 30th and March 31st every year) and submit to the World Bank. At the end of the implementation of the sub-project supported by the World Bank, the sub-borrower shall prepare the resettlement completion report, minority development and social development completion report (if any) submit to the FSC for review and then submitted to the World Bank for filing and review by the FSC.

7.5.2 External monitoring

Sub-borrower entrusts External monitoring to independent agencies through public bidding, including externally monitoring and evaluating the resettlement activities, social action plans, ethnic minority development plans of the whole project until all are completed. Independent institutions or individuals could be academic or institutional organizations, non-governmental organizations (NGOs), or independent consulting firms, but with qualified and experienced staff.

The external monitoring organizations shall prepare the monitoring report on resettlement every half year and submit the national minority development plans and social action plans (including gender development plan) (if any) to the World Bank on 30th September and 31st March of each year.

8. Public Participation, Information Disclosure and Grievance Redress Mechanism

8.1 General

The measures adopted or to be adopted must be described in the environmental and social management documents like environmental impact assessment reports, general environmental management plan as well as in the resettlement plan, ethnic minority development plan, and social assessment report. Immigrants, residents, ethnic groups, poverty groups, and females should be involved in the proposed activities.

Prior and informed consultation must be performed without any limitation, pertaining to the environmental and social documents according to the ESMF, to promote active public participation. All documents must be made available to the public 30 days ahead of project approval (in the local language if there live ethnic groups) and documented as required.

Participation of immigrants, ethnic groups and other affected people must start prior to the project design and implementation. Public participation is required across the implementation of the project and monitoring process.

The ethnic minority development plan should incorporate the measures taken or be taken and allow the affected ethnic groups to participate in the proposed activities. In the project cycle, prior and informed consultation, without any limitation, should be conducted in the affected community, and the information should be provided in the way acceptable in ethnic groups' culture. Based upon social assessment and prior and informed consultation results, a conclusion can be drawn on whether the project would be widely accepted by the ethnic community.

8.2 Public Participation and Information Disclosure

Considering both Category A and Category B projects could be financed under the Project, three rounds of public participation and information disclosure were

conducted for this ESMF following the Bank's policy requirements, as presented below.

8.2.1 Information Disclosure

The first draft of ESMF was posted on the official website of Shanghai Chengtou (accessible to the public) on September 30, 2018. The web link is as:

http://www.smi-co.com/node2/n578/n589/n1599/u1ai30643.html

Figure 8-1. Screenshot for the First Round of Information Disclosure

The second round of information disclosure was conducted from November 27, 2018 to December 10, 2018. The updated ESMF via the official website of Shanghai Chengtou Group The web link is as:

http://www.smi-co.com/node2/n578/n589/n1599/u1ai30801.html

Figure 8-2. Screenshot for the Second Round of Information Disclosure

8.2.2 Stakeholder Consultation Meetings

In addition to the full-text disclosure on the internet, stakeholder consultation was conducted during October-December 2018 by Shanghai Chengtou Group with the supports of its environmental and social consultants (ESMF writer), namely Tongji University and Hohai University. The consultation meetings were held in Shanghai Municipality and Lishui City of Zhejiang Province (in Yunhe County and Jingning County with She Communities[1]) among identified key stakeholders, including:

1. Relevant departments of local governments (including the Development and Reform Commission, the Finance Bureau, the Housing and Construction Bureau, the Environmental Protection Bureau, the Construction Bureau, the Ethnic and Religious Affairs Bureau, the Water Control Office, the Agricultural Office, etc.);

2. Senior sector experts and environmental and social specialists from the Yangtze

[1] She is one of the 56 ethnic groups officially recognized by the People's Republic of China, mainly present in the provinces of Fujian, Zhejiang, Anhui, Jiangxi and Guangdong.

River Delta Water Engineering Research Institute, the Asian Urban Development Center (CDIA), the Shanghai Academy of Social Science, etc.;

3. Potential sub-borrowers: Yunhe County Urban Development Investment Company (UDIC), Yunhe County Water Utility Company, etc.

Figure 8-3 ESMF Stakeholder Consultation Meeting in Shanghai

It was agreed during the meetings that:

- The framework provides clear, comprehensive and operational procedure, and no objection was raised. China's current environmental and social management requirements are strict. It is recommended to include China's new pollutant discharge permit into the environmental regulatory framework under the ESMF; further consideration is needed to reduce the time and cost of subproject preparation.
- The capacity building and training programs in this framework are very detailed. It is recommended to further sort out the plans and budgets directly related to the safeguards policies.

- The consulted minority areas attach great importance to environmental governance and highly recognized the priority investment areas of environmental protection. If the subproject involves ethnic minority areas, the opinions of ethnic minorities will be fully consulted during the preparation and implementation of the project, which is fully reflected in this framework.

8.2.3 Questionnaire Survey

The main respondents are the relevant departments and consulting institutions in Shanghai, Jiangsu, and parts of Zhejiang Province. A total of 31 questionnaires were sent out and 31 were recovered, with an effective rate of 100%.

Among the 31 valid questionnaires,19 are collected from government departments at all levels, 3 from consulting institutions, 1 from non-governmental organization, 6 from scientific research institutes or universities, 1 from financial institution and 1 from construction unit. Among the 31 respondents surveyed in the valid questionnaires, 23 are males and 8 are females. The 31 respondents included 10 people aged 18-35, 9 people aged 36-45, 11 people aged 46-55 and 1 person over 55. There are 7 people or their family members are ethnic minorities (all of whom are She ethnic group), and 24 people and their family members aren't ethnic minorities.

Among the valid questionnaires collected, 13 people expressed their satisfaction with the local environmental conditions, 14 people expressed their overall satisfaction with the local environmental conditions, 3 people think it's general, and 1 person expressed some dissatisfaction. Among the valid questionnaires collected, 6 people think that the main environmental problem is that water is not clean enough, 12 people think air is not fresh enough, 3 people think garbage everywhere, and 10 people think there are other reasons. Among the valid questionnaires collected, 12 people think that the local environmental quality situation had improved in recent years, and 18 people think that the local environmental quality situation had improved significantly in recent years.

Among the valid questionnaires collected, 9 person think that the water quality of local surface water bodies (rivers, lakes, reservoirs or ponds, etc.) is in good condition, 11 people think that the water quality of local surface water bodies is in overall good

condition, 7 person think it is in general condition, and 4 person think that it is not very good.

Among the valid questionnaires collected, 13 people think that the source of water pollution included enterprise sewage, 16 people think domestic sewage included, 4 people think aquaculture sewage included, 6 person though upstream river pollution included, 13 person think agricultural pollution included, such as pesticides and fertilizers, and 3 people think there are other reasons.

Among the 31 valid questionnaires collected, 2 people feel helpless when their local environment is in trouble and let it go. 13 people will report to government departments at all levels of their residence, and 19 people will call environmental complaints.

Among the 31 valid questionnaires collected, 24 people think that the local domestic waste is collected and treated uniformly, 4 people think that the local domestic waste is incinerated directly, and 9 people think that the local domestic waste is landfilled directly.

Among the 31 valid questionnaires collected in this survey, 16 people think that the cause of influencing air quality include enterprise exhaust pollution, 3 people think garbage burning included, 23 people think automobile exhaust emission included, 4 people though straw burning included, and 4 people think tree felling included, and 3 people think there are other reasons.

Among the 31 valid questionnaires collected in this survey, 8 people think that the causes of local environmental pollution problems include weak public awareness of environmental protection, 2 people think inappropriate management by management departments included, 12 people think missing of relevant laws included, and 7 people think insufficient enforcement included. And 5 person think there are other reasons for the local environmental pollution problems.

Among the 31 valid questionnaires collected, 22 people express there are regular environmental propaganda in their localities, and 9 express there are only occasional environmental awareness compaigns. For environmental management, 13 of the 31 person who fill in the questionnaire in this study think that the treatment of domestic

sewage and garbage should be strengthened. 19 think that the punishment of environmental pollution should be strengthened.7 person think that the management of heavy polluting industries should be strengthened. 16 people think that smooth communication channels should be established to reflect and solve the environmental problems. Environmental problems.

30 of the 31 person who fill in valid questionnaires in this survey think that local environmental protection investment mainly come from government investment at all levels. 4 think that come from loans and grants from international financial organizations. 7 people think that come from enterprise investment. 3 think that come from public payment. One think that there are still others. Other reasons.

Among the 31 valid questionnaires collected, all stakeholders agreed that the framework meets the relevant requirements of the World Bank. The objectives and scope of the framework are appropriate, the classification basis of sub-projects is adequate, the procedures of sub-projects environmental management are reasonable, the procedures of sub-projects social management are reasonable, the procedures of public participation are reasonable and effective, the complaint and grievance mechanism is reasonable and effective, and the relevant division of duties and labor are reasonable and responsibilities are clear. capacity-building plans are feasible. Three people suggested that the framework of environmental and social management should be improved in other aspects: (1) Suggestion that it should supply simplified the processing procedures according to the specific conditions of sub-projects, and to improve the efficiency of investment; (2) Suggestion should make a extension to the scope of business of the project to urbanization development projects, such as green transportation, ecological and cultural protection.

8.2.4 Special Investigation on Anxi She Village and Wuxi She Village in Yunhe County, Zhejiang Province

Figure 8-4 Yunhe County People's Government

Situation of two ethnic minority towns: Anxi Township: The total population is 2742. It owns 33.5 square kilometers land. It has 8 administrative villages and three of those villages are ethnic minority villages. 30 percent of total population of the township are She nationality. The source of income of the villagers is going out to work to and eco-tourism.

Wuxi Township: The total population is 2014. It owns 33.5 square kilometers land, 6 administrative villages, 2 of which are She ethnic minority villages. The source of income comes from working outside.

Figure 8-5 Stakeholder Consultation Meeting in the People's Government of Yunhe County

The ***She people*** have their own language but don't have words. They get married with the Han. Representatives of ethnic minorities said that the implementation of the project will optimize the living environment, which not only improve the quality of the living environment but also develop eco-tourism industry. They can take advantage of beautiful ecological environment to raise income levels. Therefore, representatives of ethnic minorities have great expectations and enthusiasm for the project. And they believe that the construction of this project has no negative impact on ethnic minorities.

8.2.5 Special Investigation on Jingning She Autonomous County, Zhejiang Province

Jingning County is the only She Autonomous County in China. There are 20,000 people in the country and the population of the She accounts for 11 percent of the total population. There are 134 She nationality habitations is distributed over townships. Jingning Country's ecological environment is very good, especially water

and air quality, which rank at the top of China. In addition, the folk culture in Jingning is rich and distinctive.

Figure 8-6 Jingning She Autonomous County People's Government

Jingning is the only She Autonomous County in China, so the She nationality's social participation in public affairs is relatively high. The development of social undertakings will also include the She population within the scope of the beneficiary population, which is in line with the World Bank's protection requirements for ethnic interests.

Figure 8-7 Stakeholder Consultation Meeting in the People's government of Jingning County

The project team inspected the Chinese She Museum, which consists of three parts: two exhibition halls and the office area. The building is rich in the characteristics of the ***She people'***s residences. The internal exhibition is based on the development of the ***She people***, through a large number of cultural relics, physical objects and the picture uses modern high-tech expression techniques to tell visitor about the development history of the She nationality and the She culture. The Jingning County Government plans to use the characteristics of the Yi national culture as an entry point to develop a characteristic national cultural industry, inherit the characteristic culture of ethnic minorities, and protect the ecological environment.

Figure 8-8 Visit of the Chinese She Museum

The project is more popular among Minority people. Therefore, the implementation of environmental protection projects will not have a negative impact on ethnic minorities, and will not infringe on their legitimate interests.

8.3 Grievance Redress Mechanism (GRM)

8.3.1 Environmental Grievance Redress Mechanism

Residents and construction workers are encouraged to raise complaints. Complaint reception departments will be appointed by each sub-borrower to communicate with the resident's committee, and dedicated spots and mailboxes will be provided in local communities for filing grievances. Besides the above appeal procedures, the affected person can directly appeal to the FSC. Before the implementation of the project, the relevant contacts and contact methods will be publicized. Environmental pollution can happen suddenly with the possible accumulative and long-term effects. Therefore, the sub-project implementer must buy environmental impairment liability insurance to

protect the assets and people. The environmental impairment liability insurance can help mitigate risks and manage liabilities, which will, in turn, reduce the adverse impacts caused by environmental accidents.

Depending on the type of complaint received, multiple time-frames will be set for grievance investigation and response, respectively. Once the grievance is justified, the associated cost spent by the whistle-blower will be reimbursed, to fulfill the purpose of "zero-cost grievance". For the sub-projects that are frequently complained about, penalty actions may be adopted such as reducing the amount of a loan or locking in payment due date etc.

In the event of any damages caused to the organizations and individuals, the sub-project implementer will compensate them in accordance with the national and local regulations. The unit amount of compensation will be calculated based on the population or land area, as in other similar cases. Should any objections to the evaluation results, legal assistance will be provided.

The life-long liability and compensation system or regular compensation system for environmental damages will be established. The sub-project implementer will be still held liable for significant environmental pollution within five years upon completion of the sub-project. In case that any environmental accidents take place during this period, the associated future projects will be blacklisted by FSC.

In an annual review, the International Business department of FSC will also examine whether a complaint is revisited after its settling. If the whistleblower is not satisfied with how it is addressed, the International Business department will take corresponding actions after the investigation.

8.3.2 Social risk and labor rights complaint and grievance redress mechanism

A complaint and grievance redress mechanism has been established to ensure the successful implementation of resettlement.

A grievance mechanism will be provided for all direct workers and contracted

workers to raise workplace concerns. Such workers will be informed of the grievance mechanism at the time of recruitment and the measures put in place to protect them against reprisal for its use. Measure will be put in place to make the grievance mechanism easily accessible to all such sub-project workers.

The grievance mechanism will be proportionate to the nature and scale and the potential risks and impacts of the sub-project. It will be designed to address concerns promptly, using an understandable and transparent process that provides timely feedback to those concerned in a language they understand, without any retribution, and will operate in an independent and objective manner. The grievance mechanism may utilize existing grievance mechanisms, as following:

Stage 1: If any AP is dissatisfied with project implementation, he/she may file an oral or written appeal with the village committee or IA; an oral appeal should be recorded by the village committee or IA in writing; such appeal should be solved within two weeks.

- Stage 2: If the AP is dissatisfied with the disposition of Stage 1, he/she may file an appeal with the sub-district office/township government or agency concerned (bureau for letters and visits) after receiving such disposition, which shall make a disposition within two weeks.

- Stage 3: If the AP is still dissatisfied with the disposition of Stage 2, he/she may file an appeal with competent administrative authorities in accordance with the Administrative Procedure Law of the PRC after receiving such disposition.

- Stage 4: If the AP is still dissatisfied with the disposition of Stage 3, he/she may file a suit in a civil court in accordance with the Civil Procedure Law of the PRC after receiving such disposition.

Besides the above appeal procedures, the affected person can directly appeal to the FSC. Before the implementation of the project, the relevant contacts and contact methods will be publicized.

Before the implementation of each sub-project, sub-borrower needs to inform the affected communities and the affected people of the contact person, contact information and channels of complaint, as well as the form of complaint registration (including the content, time, reception person, processing result, etc.) of complaint.

The APs may file appeals about any aspect of the Project. The above appeal channel will be disclosed to the APs via a meeting or otherwise so that the APs are fully aware of their appeal right. Publicity will be conducted via mass media, and collected comments and suggestions will be compiled into messages. In addition, bilingual receptionists will be appointed, and contact information for minority grievances and appeals disclosed in minority areas.

The Environmental and social Management Plan will include exemplary mitigation measures for occupational and community health and safety aspects and entail requirement for a Workers Management Plan. Labor Management Procedures Template is shown in Appendix E2b.

9. Institutional Arrangements and Capacity Building

9.1 Hierarchy of Environmental and Social Management

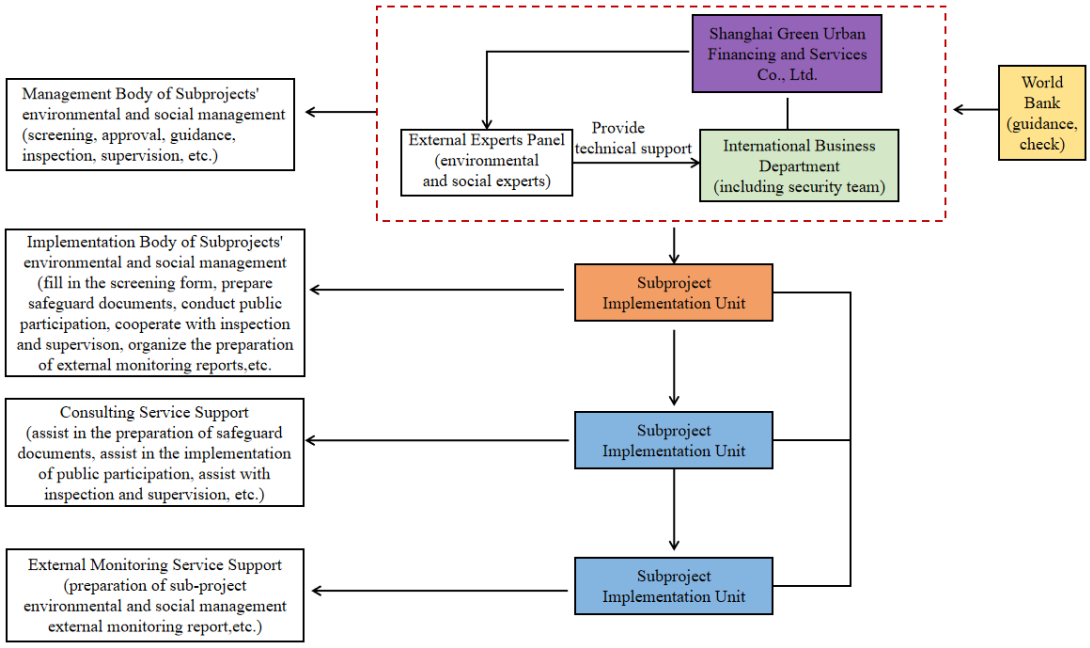

Figure 9-1 Hierarchy of Environmental and Social Management

For each sub-project included in the project, the FSC as the management body of the environmental and social management framework will be guided and assisted by the World Bank and external expert groups,

- In the application stage of each sub-project, the environmental and social risk screening forms submitted by the sub-borrowers shall be examined and approved according to this framework by FSC, and the environmental and social safeguard documents required for each sub-project shall be determined;
- In the preparation stage of each sub-project, the environmental and social safeguard documents submitted by the sub-borrowers shall be approved in accordance with this framework by FSC, and technical support and guidance shall be provided if necessary;
- In the implementation stage of each sub-project, the FSC needs to supervise the implementation of measures such as the public participation and action plan of

the sub-borrower, and review the sub-project progress report submitted by the sub-borrower, and collate the semi-annual monitoring report of the project, and report it to the World Bank for filing and spot checks; the FSC will also carry out capacity building for environmental and social management of sub-borrowers in accordance with this framework.

9.2 Roles and Responsibilities

The World Bank and KfW will:

1) Guide the preparation and implementation of ESMF;
2) Provide training and capacity building to the FSC and its associated organizations;
3) Supervise and spot-check the implementation of ESMF;
4) Spot-checks the ESMF documents of the sub-projects supported by WB/KfW loan.

The FSC will be responsible for the following:

1) In the early stage, the FSC's organizational structure will be comprised of the board of shareholders, the board of directors, the board of supervisors, the investment decision-making committee and management. The FSC will establish five functional departments (i.e. International Business, Investment, Compliance Assurance, Finance, and Administration) and a pool of external experts. The Department of International Business will take responsibility for overall environmental and social management; screen and evaluate sub-projects and conduct WB/KfW loans and post-loan management; and coordinate technical and financial advisory services that are both inward and outward. A safeguard team (2 personnel at first) will be organized in this department.
2) Provide capacity building to the sub-project implementers on environmental and social safeguards;

3) Guide and supervise the sub-project implementers to implement the ESMF;

4) Assisted by external experts, review the environmental and social safeguard documentation and its screening results and afterward lodge with the World Bank for spot-check;

5) Supervise the implementation of environmental and social safeguard documents (e.g. general environmental management plan, migration settlement plan, social action plan, ethnic minority development plan etc.) and report to the World Bank at regular intervals. The FSC will assess and manage environmental and social risks identified in sub-project evaluation and implementation.

6) After the implementation of the project, the FSC will conduct environmental and social management of the subprojects in accordance with the ESMF, and conduct bidding for ESMS consulting services.

The External Panel: The FSC will establish an external panel of experts at the beginning of the company's operation since March 2019 which including environmental and social experts recognized by the Bank as technical consultants. TORs have been added to appendix E6 and S8.

1) Guide the FSC in accordance with the environmental and social management issues of the approved sub-projects;

2) Assist the FSC in the capacity building of the sub-borrowers in environmental and social management;

3) Review the screening results of environmental and social safeguard documents and submit review opinions;

4) Review the environmental and social safeguard documents and submit review opinions;

5) Review the assessment report submitted to the FSC and provide review opinions.

6）The procurement plan for environmental and social management consulting services has been incorporated into Project Procurement Strategy for Development (PPSD).

The environmental and social department (or personnel) appointed by the sub-project implementer will:

1) Implement the ESMF with the assistance of consultants or institutions;

2) Fill out the environmental and social security screening forms in accordance with the requirements of this framework;

3) Prepare sub-project environmental and social safeguard documents according to the requirements of environmental and social safeguard documents, and report to the FSC for review and approval;

4) Publicize the environmental and social safeguard documents;

5) Supervise the implementation of the safeguard documents and assist with the FSC's audits and supervision. A periodic process report should be submitted to the FSC;

6) External monitoring and evaluation institutions will be hired to independently monitor the implementation of the safeguard documents; report to the FSC the progress in the implementation of the plans such as environmental management plan, social action plan, and migration settlement plan every half year.

The consultancy for environmental assessment, social assessment, and migration monitoring will: prepare an environmental impact assessment report, social assessment report, migration settlement plan, and where relevant, ethnic minority development plan, as commissioned by the sub-project implementer.

The consultancy for monitoring of environmental management plan will: monitor the implementation of the environmental management plan, and periodically submit a monitoring report to the FSC.

The consultancy for monitoring of social and migration plan will: monitor the implementation of the social action plan, migration settlement plan, or where relevant, ethnic minority development plan, and periodically submit a monitoring report to the FSC. The consultants and/or qualified consultancy will provide social and migration training to the sub-project implementers and related social and migration administration authorities.

The personnel or technical consultants responsible for environmental and social management in the above-mentioned FSC, an expert group, and sub-borrowers should remain basically stable, and the changes need to be approved by the World Bank.

9.3 Reporting mechanism

A set of reporting templates and tables will be developed by the FSC, to collect and manage environmental and social information of all sub-projects.

The sub-project implementer should prepare a progress report (including the external monitoring reports) every half a year, during the course of implementation of the environmental impact assessment report, general environmental management plan, migration settlement plan, ethnic minority development plan and social action plan (gender and development plan included), and submit to the FSC on July 31 and January 31 each year. After consolidation by the FSC, the report will be lodged with the World Bank on August 31 and February 28 each year, for spot-check.

The external monitoring report mainly includes the external monitoring report of the sub-project environmental management plan, the resettlement monitoring report, the minority development plan and the social action plan (including the gender development plan) (if any).

Prior to its completion of the world bank loan, the sub-project implementer should prepare a project completion report on environmental management planning, migration settlement, ethnic minority development, and social development, respectively, and submit to the FSC. FSC will afterward send to the World Bank.

9.4 Capacity Development Plan for Environmental and Social Management

9.4.1 Team building plan

The FSC will set up the teams for implementation. After the FSC is legally registered, some of the management team members responsible for the world bank loan businesses of DFV will be transferred to the FSC, for inheritance and development of DFV business.

A compliance and risk assurance department will be organized, which will overlook risk control including environmental and social risks, at a corporate level.

A department for the International Business will be established, consisting of senior management who have experience and expertise in working with the World Bank or other international financial organizations. Eight full-time employees are budgeted and will be recruited, depending on the project progress. In this department, a safeguarding team comprised of environmental specialists and social specialists (qualification requirements and duties specified in Table 9-1 will be organized to work with risk assurance department for environmental and social management. The safeguarding team will also coordinate with the World Bank for environmental and social matters.

Aside from the International Business department, an expert panel will also be established (6-8 people at the start), depending on the project progress. The environmental, social and migration experts (qualification requirements and duties specified in Table 9-1 will be invited to review the work completed by FSC and sub-project implementers and provide technical assistance.

Table 9-1 Qualified Requirements and Job Description of the Environmental and Social Management Specialist

Safeguard team in the International Business department	**Environmental Specialists**	**Social Specialists**
	Qualification: 1) Having a master's degree or above in environmental or related studies, with a relevant professional background in principle; 2) Proficiency in English application skills; 3) At least three years of relevant work experience in the field of environmental finance or pollution prevention; the candidate having experience in loan projects of international financial institutions such as the World Bank is preferred	**Qualification:** 1) Having a master's degree or above in social management or related studies, with a relevant professional background in principle; 2) Proficiency in English application skills; 3) At least three years of work experience in social security management, experience in loan projects of international financial institutions such as the World Bank, and experience in resettlement and minority areas are preferred.
	Main Duties: 1. Manage and coordinate environmental management related matters at the International Business department, and implement, supervise and guide environmental management of the sub-projects. 2. Implement environmental management provisions in accordance with the approved environmental management framework requirements. 3. Provide environmental management capacity training to the sub-projects implementation units (if any). 4. Guide and supervise the sub-projects implementation units to carry out in line with the environmental management	**Main Duties:** 1. Manage and coordinate social management related matters at the International Business department, and implement, supervise and guide social management of the sub-projects. 2. Implement social management provisions in accordance with the approved social management framework requirements. 3. Provide social management capacity training to the sub-projects implementation units (if any). 4. Guide and supervise the sub-projects implementation units to carry out in line with the social management

	framework. 5. Confirm the screening results of environmental safeguard documents. 6. Approve the environmental safeguard documents and submit them to the World Bank for filing and spot-check. 7. Supervise the implementation of environmental safeguard documents (eg. EIA report, EIA form, environmental management plan, and environmental monitoring plan etc), and regularly summarize periodic reports to the World Bank. **8.** Review and approve the submitted environmental external monitoring and evaluation report of the sub-borrower.	framework. 5. Confirm the screening results of social safeguard documents. 6. Approve the social safeguard documents and submit them to the World Bank for filing and spot-check. 7. Supervise the implementation of social safeguard documents (eg. immigration plan, social action plan, minority development plan, etc), and regularly summarize periodic reports to the World Bank. 8. Review and approve the external monitoring report of social and resettlement submitted by the sub-borrower.
External Experts Panel	**Environmental experts**	**Social experts**
	Qualification: 1) Having strong expertise in the environmental field or industry and familiar with domestic and international developments; 2) Familiar with the World Bank's and China's policies and legislation and master the technical guidelines of the EIA review; 3) Having an advanced professional technical title and at least 10 years or over 10 years' experience in this field.	**Qualification:** 1) Having strong expertise in the social field or industry and familiar with domestic and international developments; 2) Familiar with the World Bank's and China's policies and legislation and master the technical guidelines of the social impact related evaluation; 3) Having an advanced professional technical title and at least 10 years or over 10 years' experience in this field.

	Main Duties: 1. Assist the FSC in guiding the environmental management of the sub-project in accordance with the approved environmental and social management framework; 2. Assist the FSC to carry out capacity building in environmental management for the sub-borrowers; 3. Determine and update environmental screening criteria and risk ratings, etc. 4. Assist the FSC in guiding the review and approval of environmental safeguard documents and submit the review opinions; 5. Guide the sub-borrower to develop the environmental safeguard documents (including the external monitoring report) and provide relevant capacity training for FSC's staff and sub-borrowers; 6. Track the latest environmental management policies and requirements of international financial institutions such as China and the World Bank.	**Duties:** 1. Assist the FSC in guiding the social management of the sub-project in accordance with the approved environmental and social management framework; 2. Assist the FSC to carry out capacity building in social management for the sub-borrowers; 3. Determine and update social screening criteria and risk ratings, etc. 4. Assist the FSC in guiding the review and approval of social safeguard documents and submit the review opinions; 5. Guide the sub-borrower to develop the social safeguard documents (including the external monitoring report) and provide relevant capacity training for FSC's staff and sub-borrowers; 6. Track the latest social management policies and requirements of international financial institutions such as China and the World Bank.
Sub-borrowers	**Environmental management specialists**	**Social management specialists**
	Qualification Having at least two-year work experience in environmental, civil engineering and industrial & civil architecture fields.	**Qualification** Having at least two-year work experience in social safeguards.
	Main Duties: 1. Responsible for environmental management of the	**Main Duties:** 1. Responsible for social management of the sub-projects

	sub-projects, and implementing environmental management framework with the assistance of consultants or consultancy. 2. Conduct preliminary screening of environmental risks of the sub-projects in accordance with the approved environmental management framework, understand the requirements of project-specific environmental safeguard documents and submit to the FSC 3. Entrust the consultancy to prepare sub-project specific environmental safeguard documents and submit to the FSC for review and approval. 4. Disclose the environmental safeguard documents. 5. Monitor the implementation of environmental safeguard documents and assist with external audits and supervision; submit a periodic progress report to the FSC on the implementation of the environmental management plan 6. Engage external independent monitoring and evaluation agencies to conduct external monitoring of sub-project environmental safeguard documents and submit periodic reports to the FSC regularly.	and implementing social management framework with the assistance of consultants or consultancy. 2. Conduct preliminary screening of social risks of the sub-projects in accordance with the approved social management framework, understand the requirements of project-specific social safeguard documents and submit to the FSC. 3. Entrust the consultancy to prepare sub-project specific social safeguard documents and submit to the FSC for review and approval. 4. Disclose the social safeguard documents 5. Monitor the implementation of social safeguard documents and assist with external audits and supervision; submit a periodic progress report to the FSC on the implementation of the social management plan. 6. Engage external independent monitoring and evaluation agencies to conduct external monitoring of sub-project social safeguard documents and submit periodic reports to the FSC regularly.

9.4.2 Objective of Safeguard Capacity Building

Capacity building will be driven in two ways – firstly, adding team members and building their capabilities; and secondly, engaging external consultants and experts.

As the business grows, the team will gradually expand to 46 personnel from 30 at the initial stage (the first five years after the business starts), and more division sectors will be organized. Through recruiting and training, the overall quality and competence of the team are expected to be improved. It is anticipated that in five years the team will grow into a group of high-level personnel that is skilled in foreign languages and finance, familiar with international rules and norm, and passionate in seeking out opportunities in global competition.

The establishment of a pool of consultants and external experts will further help the team to grow. Starting from six to eight experts involved in project decision-making, the pool of experts will be developed into a think-tank comprised of almost 20 experts covering all fields in five years.

9.4.3 Capacity building implementation model

The FSC will adopt four ways specified below for capacity building, and the International Business department will depend on its own status, choose one or more of them to build capabilities.

1) The International Business department will recruit full-time and part-time employees that are experienced in environmental and social management or have technical backgrounds to focus on implementation;

2) Relying on the FSC's funds or the World Bank's IST funds, aside from this, expert panel meetings will be organized to exchange knowledge and experience where needed, for improving environmental and social risk control;

3) Targeting at the establishment of the FSC's own ESMS commensurate with its ambitious vision in the long run, the competent consultant will be commissioned to support the FSC with the long-term Environmental and Social Management System (ESMS)

Development Plan. With reference to the international benchmarks, relevant technical documents and training materials will be prepared to support the development of the FSC's own ESMS to cover all its product lines. The consultants' ToRs will include the ESMF as reference material, and the Bank's team will help to review the ToRs for consultant recruitment to ensure the achievements of expected objectives.

9.4.4 Time-schedule of capacity building

Additionally, FSC will build an external expert team including senior professional experts both in environmental and social issues, the expert team and the staff of FSC will have routine training programs and workshops related to the ESMF. All the sub-project borrowers will learn to implement the ESMF during the life cycle of the sub-projects with the support from FSC, external experts and WB.

The third component of the project about the Institutional Development Plan (IDP) Component will guarantee the capacity building of the FSC and the related stakeholders. This part of World Bank Loan will support FSC and its shareholders, external expert team, sub-project units etc. to build capacity, and to improve project identification, design, investment, operation, management capabilities and service level.

The environmental and social management capabilities training program is as follows:

Table 9-2 Phased training plan for environmental and social management capacity building

Target Audience	Training content	Objective	Resource/ Trainer	Numbers (people/ time)	Measures	Time (day)	Timeline
FSC's staff working on WB loan business, including senior management staff. Environmental and Social Specialists in International Business departments	Interpretation of the environment and social management framework, the main contents are as follows: 1. The main role in the project implementation process; 2. Policy and regulatory requirements; 3. Relevant environmental protection measures and requirements (General Environmental Management Plan); 4. Sub-project application, review forms for potential environmental and social safeguard issues; 5. Project selection and implementation rules and requirements; 6. Sustained public participation and implementation of complaints. 7. The role of the resettlement policy framework, minority development framework and etc.	To strengthen the implementation capacity of FSC staff on safeguards by training on ESMF, WB policies, domestic environmental policies (recent reforms), M&E, and pipeline selection from safeguards perspective.	World Bank Experts, Staff from FSC and Shanghai Chengtou Group, other international and domestic consulting company	2~4	Training Course	2	At least once per quarter for the first two years, then twice per year
				2~4	Seminar	2	Once per quarter, 4 times per year

Target Audience	Training content	Objective	Resource/ Trainer	Numbers (people/ time)	Measures	Time (day)	Timeline
External environmental and social experts of FSC	From the perspective of environmental management systems, through the training of ESMF, understand the WB's environmental and social framework system	To enhance the knowledge and implementation capacity of external experts on safeguards by training on ESMF, WB policies, domestic environmental policies (recent reforms), monitoring and evaluation(M&E), project pipeline selection from safeguard perspectives	World Bank Experts and Chengtou/ DFV staff with experiences of working with WB, other international and domestic consulting company	2	Training Course, Workshop (Senior)	2	At least once per quarter for the first two years, then twice per year
				2	External Expert Consultation		

Target Audience	Training content	Objective	Resource/ Trainer	Numbers (people/ time)	Measures	Time (day)	Timeline
FSC's clients, including enterprises and sub-borrowers	Interpretation of the environment and social management framework, the main contents are as follows: 1. The main role in the project implementation process; 2. Policy and regulatory requirements; 3. Relevant environmental protection measures and requirements (General Environmental Management Plan); 4. Sub-project application, review forms for potential environmental and social safeguard issues; 5. Project selection and implementation rules and requirements; 6. Sustained public participation and implementation of complaints. 7. The role of the resettlement policy framework, minority development framework etc.	To improve clients' understanding of procedures for obtaining FSC funding, sub-project appraisal criteria, the requirement for sub-project M&E, requirements of safeguards, procurement, and financial management detailed in the operational manual.	FSC staff and external experts	10~20	Training Course	2	once per month in the first year; once per quarter in the second year

Table 9-3 Capacity Building Plan and Budget for Safeguard Management (Draft): 2019-2023

Topic	Objectives	Training Content	Target Audience	Resource/Trainer	Modality	Outputs/Outcomes		Total Budget in first 5 years (RMB)	Annual Budget (RMB)	Total Budget in first 5 years (USD)	Annual Budget (USD)
For FSC Staff:											
Social and Environmental Safeguards Management	To strengthen the implementation capacity of FSC staff on safeguards by training on ESMF, WB policies, domestic environmental policies (recent reforms), M&E, pipeline selection from safeguards perspective	Security policy and operation manual training	FSC staff working on WB loan (including management staff and operational level)	WB staff and Chengtou/DFV staff with experiences of working with WB	Training	Number of staff trained and indicating improvement of performance as a result of training		¥486,500	¥97,300	$70,000	$14,000
					Seminar/Lecture		Once / quarter, 4 times / year, for 5 years.	¥382,250	¥76,450	$55,000	$11,000
					Development of Environment and Social Management System (ESMS);Literature preparation and publication (including ESMF updating)		once(update if necessary)	¥1,390,000	¥278,000	$200,000	$40,000
For External Experts of FSC											
Capacity of External Experts Panel	To enhance the knowledge and implementation capacity of external expertson safeguards by training on ESMF, WB policies, domestic environmental policies (recent reforms), monitoring and evaluation(M&E), project pipeline selection from safeguard perspectives	ESMF, world bank policy, etc.	External experts hired to provide consulting services at onset	WB staff and Chengtou/DFV staff with experiences of working with WB，consultant firms local and international	Training; workshops	Number of staff trained and indicating improvement of performance as a result of training	2-day training (at least quarterly in the first 2 years, and then twice / year after 2 years	¥556,000	¥111,200	$80,000	$16,000
		Seminars in various fields related to company business	External expert team	External experts (including technology, finance, law, etc.), consultant firms local and international	workshops	Strengthening communication among external experts will help experts in various fields to provide better decisions for enterprises.	1 time/ quarter, totally 20 times in the first 5 years.	¥556,000	¥111,200	$80,000	$16,000
					External expert consultation fee (including safeguard experts)		USD 30,000/ year/person, about 8 people/year, for 5 years.	¥2,085,000	¥417,000	$300,000	$60,000
For FSC's clients:											
Clients Training and Technical Assistance	To improve clients' understanding on procedures for obtaining FSC funding, and provide the clients with advisory services.	FSC's subproject appraisal criteria, requirement for subproject M&E, requirements of safeguards, procurement and financial management detailed in the operational manual; provide advisory services/trainings related to: technical design projects and management of infrastructure assets (from engineering point of view), financial management, preparation of procurement and contract documents, etc.	FSC clients (sub-project implementation units)	FSC staff and external experts	Training in combination with on-demand technical assistance	Number of subprojects prepared and implemented in accordance with FSC guidelines	2-day training plus hands-on technical assistance (according to pipeline schedule and clients' demand) The expenditures will be shared with PIU	**¥2,085,000**	¥417,000	$300,000	$60,000
Total (in the first 5 years)								**¥7,540,750**	**¥1,508,150**	**$1,085,000**	**$217,000**