



**World Bank Financed
Ningbo Sustainable Urbanization
Demonstration Project**

**Environmental and Social
Management
Framework**

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**Ningbo Municipal Research & Design Institute
Of Environmental Protection**

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Abbreviation & Acronyms

Name	Abbreviation	Acronyms
Agriculture and Forestry Bureau		AFB
Construction supervision company		CSC
Development and Reform Commission		DRC
Development and reform bureau		DRB
Environmental assessment		EA
Environmental Protection Bureau		EPB
Environmental impact assessment		EIA
Environmental impact report		EIR
Environmental Protection Bureau		EPB
General Guidelines for Environment, Health and Safety	EHS Guidelines	
Huadong Engineering Cooperation Limited,		HECL
Implementation agency		IA
Ningbo Municipal Research & Design Institute of Environmental Protection		NMRDIE
Ningbo Project Office for World Bank Financed Project	Ningbo PMO	NPMO
Ningbo Sustainable Urbanization Demonstration Project	NSUD Project (or the demonstration project)	NSUDP
Project implementation agency		PIA
Public Transportation Company		PTC
Shanghai Municipal Engineering Design Institute (Group) Co., Ltd.		SMEDI
Traffic Police Brigade		TPB
Urban management bureau		UMB
Urban Management Bureau		UMB
the World Bank	the Bank	
Water Resource Bureau		WRB

1 Introduction

1.1 BACKGROUND

To accelerate the urbanization development in Ningbo, establish and improve a safe, rapid, efficient, clean, economical and integrated, modernized urban transportation system as well as a flood risk management system, Ningbo Municipality intends to apply to the World Bank for its loan to strengthen the urban transport management and flood risk management by reference of the Bank's advanced experience in transportation management and flood risk management, so as to improve the urban infrastructures and public transport services in the municipality to realize the objectives of urban sustainable development and livability enhancement.

The World Bank financed NSUD Project will be implemented in Xiangshan County, Ninghai County and Fenghua City under the jurisdiction of Ningbo. Among others, the feasibility study has been carried out for the subprojects of Xiangshan, and the environmental and social impact assessments have also been completed for them. Because only preliminary alternatives had been ascertained for the subprojects in Ninghai and Fenghua prior to the project appraisal, no assessments have been conducted for them. In accordance with the policies of the Bank, an environmental and social management framework needs to be prepared to guide the work in future.

1.2 OBJECTIVE

The objective of the framework is to, from the environmental and social angle, put forward a complete set of procedures, criteria and requirements for selection of prospective subprojects, identification, assessment and monitoring of their environmental and social impacts. Furthermore, the framework will also allow the project applicants and implementation agencies to understand the requirements in the environmental and social aspects, as well as to know well the works to be carried out in the preparation and implementation stages.

2. Project Description

The Ningbo sustainable urbanization project has been developed to pilot China's new national urbanization strategy. The objective of the project is to improve the use of urban public space and urban mobility; and reduce flood risk in selected counties in Ningbo municipality. To achieve this goal, the project will finance investments in urban regeneration, urban transport and flood risk management sectors. The three selected counties, namely Xiangshan, Ninghai and Fenghua, will jointly receive an IBRD loan of US\$ 150 million to support these proposed infrastructure investments and related capacity building activities. It is expected that by appraisal about half of the investments, mostly in Xiangshan County, will have finalized FSRs for a full appraisal, while the rest of the projects will have been identified, and pre-feasibility studies completed. This ESMF is therefore prepared for the subprojects in Fenghua and Ninghai that are subjective to the final appraisal at the early stage of project implementation.

Ninghai and Fenghua, to be the follow-up subprojects area, are located in the south of Ningbo where the infrastructure and development are relatively backward. Their scope and nature are basically similar to those of Xiangshan. Namely these subprojects contents also include the three components of urban regeneration, public transport and flood risk management.

The subproject activities are targeted in compliance with the specific situation of each county. The activities in Ninghai County are mainly to improve public transport and relieve the traffic pressure, to upgrade flood control and drainage condition to reduce the flood risk. The activities in Fenghua Xikou Town and Xiwu Town are mainly to raise the public space quality in the old town area. The detailed implementation plans are as follows:

2.1 SUBPROJECTS IN NINGHAI COUNTY

The proposed tentative subprojects in Ninghai are shown in Table 2.1-1.

Table 2.1-1 List of Subprojects in Ninghai

Component (Subproject)		Objectives	Main Implementation Contents
Urban regeneration			
Core urban district	Public space retrofit	Old urban area retrofit to upgrade the quality of public space in the old urban area	Repair of partial road surfaces in the old urban area, laying pipelines and cables underground, installation of rain and wastewater separate system, renovation of street facade, lighting, street (block) landscaping and leisure amenities.
	Road net improvement	To relieve traffic pressure in the old urban area	To widen some roads in the old urban area
Changjie Town	Road net improvement	To divert through traffic to reduce the traffic impact on the town area,	Construction or overhaul some road sections

		And raise the safety and comfortability of running vehicles	
Public Transportation			
Core urban district	Construction of stops and terminals	To raise the level and attraction of public transit service and enhance the sharing rate of public transportation and serve vulnerable groups	Construction of public transportation hubs
	Purchase of vehicles		Purchase new energy driven buses
Changjie Town	Construction of stops and terminals	To raise the level and attraction of public transit service and serve vulnerable groups	Construction of coach station
Flood Risk Management Component			
Core urban district	Reconstruction of drainage network	To reduce the flood risk to vulnerable groups, especially poverty-stricken population, to protect people's lives and properties; to improve the environmental sanitation and water body environment in the urban district	To dredge and realign drainage pipelines and reconstruction of inspection wells and rainfall collection wells
	Rearrangement of drainage canals		Canal dredging and rearrangement
	Flood drainage ditch		To widen and reconstruct flood drainage ditches
	Demonstration of low impact development (LID)		Sunken green belts and sidewalk paved with non-watertight tiles
Changjie Town	Reconstruction of drainage pipe network		Construction of new drainage ditch
	Rearrangement of drainage canals		Dredging and realignment of watercourses
	Flood drainage ditches and culverts		Construction of flood drainage ditches and water-through culverts
	Demonstration of low impact development (LID)		Sunken green belts and sidewalk paved with non-watertight tiles

2.2 SUBPROJECTS IN FENGHUA

The proposed tentative subprojects in Fenghua are shown in Table 2.2-1.

Table 2.2-1 Constituents of Subprojects in Fenghua

Subprojects/Component		Implementation Objectives	Main Implementation Contents
Urban regeneration			
Xikou Town	Public space retrofit	Old town area of Xikou Town	To raise the public space quality in the old town area and enhance the internal security in the town area
			To strengthen transportation management in the old town area to improve the internal traffic safety in the town.
Xiwu Town	Public space retrofit	Old blocks in Xiwu Town	To raise the public space quality in the old blocks and enhance the internal safety
Flood Risk Management Component			
Xikou Town	Reconstruction of drainage network		To reduce the flood risk to vulnerable groups, especially poverty-stricken population,
	Rearrangement of drainage canals		to protect people's lives and properties; to improve the environmental sanitation and water body environment in the urban district
	Drains		
	Demonstration of low impact development (LID)		
			Integrated renovation of pipelines of rainwater, wastewater, water supply, and embedment of overhead lines; reconstruction of such infrastructures as fire facilities, public toilets, solid waste collection spots and stations, parking lots, etc.; upgrading of old and unsafe buildings; renovation of old agro-produce markets; landscaping, etc.
			To install automatic traffic lights, intelligent-eyed traffic monitoring system, set up a central platform for traffic management and develop relevant software; intellectualized retrofit of parking lots and renovation of parking guidance system as well as traffic marks and signs
			Public space retrofit in the old town area
			To dredge and realign drainage pipelines and reconstruction of inspection wells and rainfall collection wells
			Canal dredging and rearrangement
			Construction of open drains along both sides of some road sections
			Sunken green belts and sidewalk paved with non-watertight tiles

3. Related Policies, Laws and Regulations

In the future preparation of ESIA for the follow-up Ninghai and Fenghua Subprojects, the national laws and regulations as well as technical guidelines shall be observed, meanwhile the safeguard requirements shall be met of the Bank related to the project. Because the scopes of the subprojects to be implemented in Fenghua and Ninghai are similar to those of Xiangshan, with reference of ESIA for Xiangshan subprojects, the main national laws and regulations and World Bank's safeguard policies are below. For details, please refer to those in ESIA for Xiangshan subprojects.

3.1 POLICIES AND GUIDELINES OF WORLD BANK

- 1) Environment Assessment (OP, BP and GP 4.01);
- 2) Physical and Cultural Resources (OP 4.11);
- 3) Unvolunteray involuntary resettlement (OP/BP 4.12),;
- 4) Business Information Disclosure (BP 17.50);
- 5) General Guidelines for Environment, Health and Safety (EHS Guidelines);

3.2 NATIONAL LAWS AND REGULATONS

- 1) Environmental protection law of PRC (Jan. 2015);
- 2) Environmental Noise Pollution Prevention Law of PRC (Mar. 1997);
- 3) The Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution (Revised Jan. 1, 2016);
- 4) The Environment Impact Assessment Law of PRC (Sep. 2003);
- 5) Law of PRC on Prevention of Solid Waste Pollution to Environment (Apr. 2005)
- 6) Water Pollution Prevention Law of PRC (Jun. 2008) ;
- 7) Administrative Regulations on Environmental Protection for Construction Projects, Nov. 1998;
- 8) Tentative Provisions for Public Participation in Environmental Impact Assessment (HuanFa 2006 [No. 28] , Mar. 2006);
- 9) List of Classified Adminstration on Environmental Impact Assessment for Construction Projects (Decree 33 of the Ministry of Environmental Protection, June 2015);
- 10) Provisions on Review and Approval of environmental impact assessment documents for construction projects by level (No. 5 Decree of the Ministry of environmental protection, Mar. 2009);
- 11) Guiding Catalogue 2011 for Industrial Structure Adjustment (Revision 2013) (Decree 21 of NDRC, May 2013).

4. Main Environmental and Social Impacts

Currently, the specific capacities, alternatives, locations, etc. of subprojects to be implemented in Fenghua and Ninghai have not yet been clear. However, their constituents and scopes are basically consistent with those of Xiangshan, and their environmental and social influence impacts are also similar to those of Xiangshan. Therefore, with reference of ESIA for Xiangshan Subprojects, the main environmental and social impacts of the follow-up subprojects are briefly described as follows.

4.1 ENVIRONMENTAL IMPACT

Construction Period

1) Atmospheric environment impact

The main factor of impacting the atmospheric environment during construction period is construction fugitive dust.

Construction fugitive dust mainly comes from such processes as site leveling, fill-soil transport and compaction, handling, stacking and transport of building materials, and foundation excavation etc. on construction site; vehicles driving on unpaved roads and sites may also generate fugitive dust. The fugitive dust arising from site leveling, foundation excavation and vehicle transportation are the three heaviest factors of impacting the atmospheric environment during construction period.

The contractor shall take such measures as spraying water to suppress dust, keeping road clean and controlling running speed of construction vehicles etc. to control the degree and range of fugitive dust impact.

2) Impact on water environment

Generally, wastewater sources during construction period mainly include domestic sewage of constructors, wastewater from washing construction machines and vehicles as well as muddy water on construction site. Without effective treatment, the wastewater in construction period may contaminate surface water bodies nearby construction sites and block sewers.

Where possible, constructors' domestic sewage shall be treated through peripheral public facilities (like public restrooms etc.) or they may rent nearby farmers' houses; if a centralized constructors' living area is set up, their domestic sewage must be pretreated through septic tank and oil separator and then discharged into municipal sewer network, thus its impact to the surface water environment is less.

A centralized washing area shall be set for construction machines and vehicles. Around the washing area, collecting gutters and oil separation and grit settlement tank shall be set; wastewater after oil separation and sedimentation disposal shall be reused as far as possible for dust suppression, thus basically no adverse impact will be brought to the surface water environment.

Constructional muddy water primarily includes wastewater from foundation trench excavation and runoff wastewater through construction site on a rainy day, which contains much silt, if discharged into municipal pipe network or surface waters, they may block the pipe network or pollute the waters. Generally, collecting gutters shall be set around

construction site to collectively divert the abovementioned wastewater to a sedimentation basin for disposal, then being discharged.

Under this Project, watercourse dredging and improvement works may disturb natural water bodies during construction to make their SS concentrations rise; however, the construction activities will not bring new pollutants to these water bodies; generally the SS concentrations will recover to their original status shortly after project completion.

3) Acoustic environment impact

Main acoustic environment impact factor during construction period is noise of constructional machines and vehicles.

Constructional noise will inevitably bring detrimental effects to the surroundings. The contractors shall strengthen their management by using low noise equipment and plants, limiting vehicle running speed and prohibiting tooting; constructional operations in nighttime shall be strictly forbidden of generating noise pollution.

4) Solid waste

Generally, solid waste generated in construction mainly includes domestic garbage of constructors and construction waste. After being disposed according to the management requirements of the sanitary agency and urban administrative agency, the forementioned wastes will not bring obvious impacts onto the ambient.

The works of dredging watercourses and sewers may produce a great amount of sludge, the disposal and whereabouts of which may be one of environmentally restrictive factors.

The subproject implementing agencies shall, on the basis of the monitored data, identify potential purposes of various kinds of sludge. Such utilization measures shall be prioritized as use in farmland and landscaping; only under the precondition of non-usability, can such sludge be disposed environmentally friendly, however, permanent spoil ground shall not be set up as far as possible.

5) Ecological environment impact

First of all, to prevent the ecological environment from being deteriorated by the construction, this Framework requires that such areas sensitive to the ecological environment should not be sited as subproject locations as nature reserve, scenic spots, basic farmland preservation area, key zone of controlling water and soil erosion etc. (Refer Section 5 for details).

The key factor of impacting the ecological environment is land occupation by construction, which may destroy the original landform and vegetation, causing water loss and soil erosion.

The contractor shall reduce temporary land occupation as much as possible and after construction being completed, the original landform status of the temporarily occupied land shall be recovered immediately; as to the vegetation losses due to permanent land occupation, measures like afforestation, landscaping etc. shall be adopted for ecological compensation, and the compensation amount shall be no less than that destroyed. For mitigation of water loss and soil erosion, a separate water conservation program shall be worked out, according to which measures shall be put into practice.

Operation Period

1) Atmospheric environment impact

According to the characteristics of subprojects, the key factor of impacting the atmospheric environment is automobile tail gas. As analogical survey results indicate, generally the degree of impact of vehicles tail gas to the environment meets the related standard.

2) Effects on water environment

The factors of influencing water environment during operation period include negative impact and positive effect.

Negative impact factor mainly is the domestic sewage from project staff and workers in public transportation terminals as well as passengers. Generally all the sewage can be intercepted by sewers and finally will inflow into an urban WWTP for treatment, so it has no significant impact to the environment.

The positive effect factors primarily include two aspects: (i) Dredging of watercourses is favorable to improving their water quality; (ii) reconstruction of urban pipe network will significantly raise separation rate, reducing volume of wastewater directly discharged into surface waters, which is advantageous to ameliorate water quality of surface waters.

3) Acoustic environment impact

Based on the characteristics of the subprojects, primary factor of affecting the acoustic environment during operation period is traffic noise from new constructed or widened road works. Because the roads under this Project mostly are municipal ones, in general, sound barriers are not suitable to be erected along them. Therefore, primarily, where possible, new roads shall be kept away from such acoustic-environment-sensitive objects as residential areas, schools etc.; secondarily, such measures shall be taken as to adopt low noise road surface in design, set speed limits for road sections through targeted sensitive areas as well as no tooting signs to ensure that the quality of targeted sensitive acoustic environment will not be deteriorated.

4) Solid waste

During project operation period, main solid waste is household rubbish, which will be collected, transported and disposed by entrusted sanitary agencies, the impact of which is light to the environment.

In addition, there may be vehicle maintenance functions in public transport terminals and other works. If so, used oil and other machine repair waste will be generated. Such kinds of waste belong in hazardous ones, which shall be disposed by entrusted entities with specialized qualifications for safe disposal so as to meet environmental requirements.

4.2 SOCIAL IMPACT

Construction Period

The impacts of this Project to the social environment are mainly negative ones, which are reflected in land acquisition, resettlement and residents' trips.

1) The incomes and livelihood modes of households affected by land acquisition and house demolition will be affected to different extents.

The project implementing agencies shall carry out the land acquisition and resettlement work in strict accordance with the requirements set forth in the social assessment report to recover the livelihood of the affected people, compensation shall be paid to the affected in full amounts and in time, so as not to affect their life and residential conditions for long.

2) Road overhaul and public space retrofit may bring some impacts on trips of vehicles and pedestrians. Before construction, PIA and contractor shall contact the traffic police department, work out a traffic reconciliation scheme for construction period, which shall be contained in the construction management plan.

3) The public space retrofit may impact on the trip conditions of pedestrians and vehicles, and further impact on the interests of merchants of stores along the roads. The contractor shall adopt reasonable construction schemes to reserve necessary sidewalks and merchants' passageways to ensure that they can operate their business normally.

4) Pollutions such as fugitive dust, noise and construction waste generated during construction period may impact on the daily life, traffic and teaching activities of residents and schools surrounding the construction areas. The contractor shall strictly put into place the environmental protection measures proposed by the environmental impact report, conduct publicity and education in terms of construction safety, relieve negative impacts and avoid disturbing residents as far as possible.

Operation Period

Social environment influences are mainly positive:

- 1) Good for relieving transport pressure, and promoting safety and accessibility of road;
- 2) Good for improving the urban road network, and the urban public transport facility layout and trip efficiency;
- 3) Good for improving the urban commercial environment and public utilities;
- 4) Good for enhancing economic benefits of the project area;
- 5) Good for reducing flood risks to vulnerable groups, especially poverty-stricken people and protecting people's lives and property safety; improving environmental sanitation and water environment in the urban areas.
- 6) Good for promoting the employment of residents, particularly vulnerable groups in the project area, and improving residents' living quality.

5. Procedures and Requirements for Environmental Management

5.1 SUBPROJECT SELECTION CRITERIA

The Bank and Ningbo PMO will further identify the prospective subprojects. Selection criteria for subprojects from the environmental and social angle are as below:

- 1) The subprojects shall be within the scope of municipal infrastructure, flood risk management and integrated transportation system, such as road construction, river rehabilitation, municipal pipeline network construction etc. Furthermore, no projects with large environmental impacts or big public concern (for example, domestic solid waste landfill and incineration projects and solid waste centralized disposal project etc.), will be included.
- 2) The environmental and social impacts of the subprojects shall be moderate, which shall not exceed the scope and category of the Bank's safeguard policies related to the Project.
- 3) No subprojects proposed shall be located within protected areas and other environmentally sensitive ones according to the national regulations and planning, or approval by the people's government at county level or above, such as drinking-water-source protection area, natural reserve, scenic spot, ecological function protection zone, basic farmland protection zone, main area of preventing water loss and soil erosion, forest park, geologic park, world heritage place etc.;
- 4) The project siting shall be in conformity with the related Regional Master Planning, Industrial Development Planning, Function Zone Planning for ecological environment, and other planning concerned;
- 5) After the public participation and consultation being conducted according to the requirements concerned, the peripheral affected people and residents can accept the implementation of the Project.

5.2 PREPARATION OF ENVIRONMENTAL ASSESSMENT

After the follow-up subprojects of Fenghua and Ninghai being clear in their scopes etc., they will respectively submit EIA covering all environmental impacts from any project activities in their administrative districts. In addition, ESIA shall include the social impacts and management measures which are taken from the SA, both of EIA and SA are compiled individually. As to the requirements related to social impact assessment, please refer to Section 6 for details.

1) National Preparatory Work for Environmental Assessment

After the subprojects being identified, the first is to process the national environmental requirements and procedures. Namely, we need to ask the national environmental protection agencies for advice about the administrative requirements on environmental assessment (EA). If EA is needed, PMO(or PIU) shall entrust a qualified EA institute to prepare the national EA report and other materials concerned, and ascertain, according to the List of Classified

Administration Construction Projects, which is needed in EA report, EA form or Registration Table.

2) World Bank's Requirements on EA

On the basis of the national EA and with the EA for Xiangshan subprojects submitted to the Bank as model, an EA including Environmental Management Plan (EMP) will be prepared and submitted to the Bank so as to meet the provisions of the Bank at the same time. Attachment 1 shows the Tables of Contents for EA and EMP

The EA/EMP (in Chinese and English) submitted to the national authorities and the Bank shall be consistent in such key contents as subproject construction scope, environmental impact analysis, mitigation measures, monitoring requirements etc.

3) Preparation of EMP

For prospective subprojects, EMP shall be prepared in accordance with the Bank's requirements, which can be included in EA as a chapter. Please refer to the model EA report including its EMP chapter for Xiangshan subprojects. EMP shall mainly cover the requirements of related environmental impact mitigation measures for construction and operation periods and those on the responsible units and other necessary contents; furthermore, relevant monitoring plans and staff training programs, etc. need to be provided.

To help the future EMP preparation for subprojects, the general environmental measures in EMP for the Xiangshan subprojects are contained in Attachment 2 in the form of Environmental Code of Practice (ECOP). The final project EA and EMP in Chinese and English shall be submitted to the Bank.

5.3 PUBLIC PARTICIPATION

Public participation needs to be conducted for prospective subprojects in accordance with the nation and Bank's requirements. It is required by the national authorities that during EA period the information be disclosed twice and the public consultation be conducted once; while by the Bank that the more the better, however the Bank's basic requirements are consistent with the national, i.e., at least once information disclosure and later public opinions shall be solicited adequately.

1) Information disclosure requirement

As required by the Bank, the information disclosure should cover the whole EA process, and the information be disclosed for at least two weeks and then the public consultation conducted so as to ensure that the affected people may have sufficient time to learn about the project and to feed back the EA opinions, and avoid just going through the motions. Information disclosure mostly includes main information and the full text of the draft EA, etc. The ways of disclosure include public disclosure in local main media (newspaper, broadcast, TV, website etc.), and the public should be informed that the disclosure time, location, and the ways for access to the concise and complete EA documents (generally the reports will be available in public places where the public are easy to look up) and how they can provide the EA feedback.

2) Public consultation

After information disclosure for at least two weeks, public consultation can be conducted. Multiple methods should be adopted to conduct public consultation, i.e., symposium, individual interview and questionnaire survey. As for recipients, affected people other than local officials should be focused and the more recipients the better. The EA concerns should be reflected in the revision of EA and preparation of EMP. EA should detail records of the dates, locations, discussion topics, ways and number of participants, the EA professions and main concerns, as well as how the EA and project design address these issues and suggestions raised by the public.

5.4 REVIEW AND APPROVAL

- 1) After EAs are completed for subprojects, EA will first be submitted to the applicable local Environmental Protection Bureau (EPB) for evaluation. At the same time, EA and EMP will be submitted to the Bank for review.
- 2) The local EPB with the authority of approval will organize experts to evaluate EA and provide the EA comments. Also, the Bank will give written evaluation comments on EA.
- 3) The EA institute will modify and improve EA incorporating the national EA evaluation comments and the Bank's comments and submit the final version to EPB for review and approval, and at the same time, to the Bank (Chinese and English versions).

5.5 IMPLEMENTATION AND SUPERVISION

- 1) Each PIU shall contain the funds necessary for EMP implementation in the estimated costs for project implementation in order to ensure that EMP can be put into practice.
- 2) Project implementation agencies, contractors and operation agencies shall, according to EA and EMP, implement the environmental impact mitigation measures, personnel training programs and environmental monitoring plans.
- 3) Ningbo PMO will have overall responsibility for the environmental performance of the project. More specific environmental supervision and control arrangements are described as follows:
 - a. The construction supervision engineer will be responsible for daily supervision of EMP measures implementation, record its status in detail in the supervision log and monthly report, and deliver weekly and monthly reports to PIU;
 - b. The PIU will regularly and irregularly carry out field supervision over the status of EMP implementation, make records so as to incorporate them in the semi-annual report;
 - c. Being entrusted, the external environment-monitoring unit shall timely supervise whether the mitigation measures are put into practice, regularly monitor quantitative indicators according to the EMP, prepare external monitoring reports based on the requirements of and the contract, and deliver them to the PIU.

- d. The Ningbo-PMO will, based on the materials and reports mentioned above in a. ~ c., with the assistance of the external environment-monitoring unit or experts, prepare a chapter concerning EMP implementation progress, which will be contained in the semiannual Project Progress Report, and submit it to the Bank timely every half year.

5.6 REPORTING AND COMPLAINT MECHANISM

Pursuant to the national environmental management laws and regulations and the Bank's business policies for construction projects, the borrowers (i.e., the owner at subproject level), shall be responsible for preparation of Monitoring and Evaluation Report (generally twice a year), the purpose of which is to ensure that the approved requirements and measures related to EMP can be put into effect, find problems and make analysis and summarization in order to control adverse environmental impacts from the follow-up works under the Project.

The primary coverage of the EMP implementation chapter shall contain:

- 1) EMP implementation: main contents of construction at the current period, what training activities had been conducted in this period, implementation status of mitigation measures, problems in existence and causes of them, and improvement measures in the next period;
- 2) Environmental monitoring results: Brief interpretations shall be made for the data monitored, problems and non-compliance phenomena described, and the EA causes analyzed, and improvement measures proposed;
- 3) The contents shall contain, if necessary, related to residents' complaints and how to address them;
- 4) Overall evaluation and conclusion on the performance of EMP in the current period, as well as suggestions and plan for the tasks in the next half year.

Grievance mechanism

If an environmental complaint event happens, the external environment-monitoring unit and the PIU needs to report to local EPB and Ningbo PMO, and to the higher authorities level by level, if necessary.

Grievance mechanism for OP4.12 compliance: In order to ensure that APs have a channel to file an appeal on any issue concerning land acquisition and resettlement, a grievance redress procedure must be established.

Stage 1: If any AP is dissatisfied with resettlement or construction, he/she may file an appeal with the village committee orally or in writing, which should make a disposition 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 after receiving such disposition, which should 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 the PMO after receiving such disposition, which should make a disposition within two weeks.

Stage 4: If the AP is still dissatisfied with the disposition of Stage 3, he/she may file an appeal with the Ningbo PMO after receiving such disposition, which should make a disposition within two weeks.

Stage 5: If the AP is still dissatisfied with the disposition of Stage 4, he/she may file a suit in a civil court in accordance with the Civil Procedure Law after receiving such disposition.

In addition, the local villager autonomy pattern is also an effective way for dispute resettlement within communities. For example, the “three-in-one” villager autonomy pattern in Xiangshan County has proven effective, where prestigious villagers are elected as advocates of villager interests and wills, and democratic decision-making, management and supervision are practiced at the village level. First, matters for voting are collected by village officials and compiled into proposals through consultation; second, proposals are reviewed and revised by the village committee, and then distributed to villagers for comment; third, revised proposals are voted on by villager representatives. This pattern ensures that matters to be voted on are based on adequate consultation, thereby giving full play to villager representatives and ensuring that decisions truly reflect public will.

6 Social Management Procedures

In the event that new project activities are proposed, a Social Assessment Report (SA) will be prepared on these activities including assessment of potential land acquisition and resettlement, ethnic minorities, gender, vulnerable groups, and citizen engagement. Informed by the SA, assessment will be made whether project activities trigger BP/OP4.12 and BP/OP4.10. Key findings of the SA will be included in the EIA as social management measures.

6.1BP/OP4.12.

If negative impact to local communities' livelihoods is unavoidable caused by land acquisition and/or house demolition, either a Resettlement Action Plan or an abbreviated Resettlement Action Plan (when land acquisition affected less than 200 people and no resettlement anticipated) will be prepared to guide land acquisition and resettlement. The principle of land acquisition and resettlement is that the design of project activities will avoid land acquisition and resettlement as much as possible, and in the case where negative impact is unavoidable, livelihoods of project affected people be at least fully restored to their previous level. The RAP or abbreviated RAP will be prepared on the basis of wide public consultation, submitted for Bank review and agreement, and disclosed locally and at Bank's InfoShop in time for public feedback. Since not all project activities can be assessed at this stage, a Resettlement Policy Framework (RPF) has been prepared and attached as Annex to this EMSF.

6.2GENDER

The SA should include assessment on how project impacts men and women differently, and make recommendations to promote women's equal share of project benefits. The project design team should fully consult findings from SA so that project activities will consider women's special and equal needs. Newly proposed activities should be in line with the overall project which should be gender-informed in project design, implementation and monitoring.

6.3VULNERABLE GROUPS

The SA will assess whether project activities have impact on vulnerable groups including low income people, people with disabilities, elderly, and other people as described by national policy, and make recommendations how to address their special needs.

6.4CITIZEN ENGAGEMENT

The SA should be conducted on the basis of wide public consultations, and record findings from these consultations in the report. During project preparation, local communities

should be fully informed, consulted, and involved in project design and planning. During project implementation, measures should be made to allow public participation in project implementation and monitoring. In addition to project information disclosure, a feedback loop should be established for local communities to oversee project implementation and freely communicate feedback to PIUs, and receive response from PIUs so that public is aware of how their feedback is responded upon.

7 Institutional Capacity

To successfully implement and complete these subprojects, Ninghai and Fenghua have set up PIUs under the local governments and Ningbo PMO for the World Bank financed project.

7.1 NINGBO PMO

In September 2003 the Ningbo Municipal Government established the Ningbo Project Management Office (NPMO) for World Bank Financed Projects under the Municipal Project Leading Group. The PMO is based in NDRC, with the guidance and supervision by the Ningbo Finance Bureau. The main responsibilities of NPMO are, under the leadership of the Municipal Project Leading Group, overall responsible for the management of project preparation, coordination and implementation.

NPMO has successfully implemented and completed the Water and Environment Project, Ningbo New Countryside Project, Ningbo Urban Domestic Waste Collection and Recycle Project, all of which are funded by the Bank. The institutional capacity of NPMO, its performances in project management, E & S impacts management are better than average level of similar PMOs in the country, which is acknowledged as one of the strongest PMOs for World Bank funded projects, and whose achievements of project implementation and completion are obvious to all.

Specific personnel list is as follows:

Dongjun LIANG: Ningbo Municipal PMO Director, responsible for overall project planning, coordination and controlling;

Rong YANG: Procurement;

Changjun CHEN: Safeguards (Environment and resettlement) ;

Lun LV: Procurement;

Yu ZHANG: Accountant.

7.2 FENGHUA PIU

In December 2015, the Fenghua City Government set up Fenghua Project Management Office for World Bank Financed Project under both of the Fenghua Project Leading Group and NPMO.

The PIU is based in the Fenghua Development and Reform Bureau (FDRB), headed by Zhou Jiancun, deputy bureau director as office director, with staff transferred from FDRB, Finance Bureau, Xikou Town and Xiwu Sub-district and recruited from the public, the professions of whom include project management, procurement, financial management, engineering technologies, environment, resettlement, monitoring, among others.

All the key staff of the Fenghua PIU once participated in the management for the Ningbo New Countryside Project and other World Bank finance project(s), with abundant experiences in the work for World Bank funded projects.

Specific personnel list is as follows:

Jiancun ZHOU: Deputy Director of Fenghua County DRC, Director of Fenghua PIU;

Leilei WANG: Procurement;

Xianbin WENG: Safeguards (Environment);
Jiong TAO: Accountant;
Haiming CHEN: Accountant Assistant;
Ding WU: Safeguards (resettlement) for Xiwu Town;
Yinjie WANG: Safeguards (resettlement) for Xiwu Town;
Linhai MAO: Engineer, project management for Xiwu Town;
Jie CHEN: Safeguards (resettlement) for Xikou Town;
Fang FANG: Safeguards (resettlement) for Xikou Town;
Baojun JIANG: Engineer, Xikou Town.

7.3 NINGHAI PIU

In December 2015 the Ninghai County Government set up Ninghai PIU under both the County Project Leading Group and NPMO for the World Bank financed project.

The office is based in the Ninghai DRB, headed by Pan Meizhen, deputy bureau director as office director, with staff transferred from Ninghai DRB, Finance Bureau and Housing and Urban and Rural Development Bureau, the professions of whom include project management, procurement, financial management, engineering technologies, environment, resettlement, monitoring, among others.

All the key staff of the Ninghai PIU have participated in the management for the Ninghai subprojects of the Ningbo New Countryside Project, with abundant experiences in the work for World Bank funded projects.

Meizhen PAN: Deputy Director of Ninghai County DRC, Director of Ninghai PIU;
Yanke CHEN: Deputy Director of Ninghai PIU, procurement;
Yangwei CHEN: Procurement;
Jiyi JIN: Safeguards (Environment)
Jianwei CHEN: Safeguards (Resettlement)
Junjie ZHU (Ninghai County Construction Bureau), Yanqin FANG (Ninghai County Water Conservancy Bureau), Yiming PAN (Ninghai County Transportation Bureau) and Xiaolong DONG (Ninghai Changjie Town) : Engineering;
Xinen WANG: Accountant.

7.4 CONSULTING AGENCIES

According to the initial plan of NPMO, the Ningbo Municipal Institute of Environmental Protection Science Research and Design and Hohai University will still be commissioned for preparation of EIA and Social Impact Assessment Reports (SIA) for the follow-up subprojects of Ninghai and Fenghua.

Both have rich consultancy experiences in World Bank financed projects, having successfully prepared EIA and SIA for such World Bank funded projects as Ningbo New Countryside Project, Ningbo Urban Domestic Waste Collection and Recycle Project as well as EIA and SIA for the Xiangshan subprojects under the Ningbo Sustainable Urban Development Project.

8 Public Consultation

8.1 INFORMATION DISCLOSURE

During the period of EA for the World Bank financed NSUD Project, information was disclosed twice; the disclosing media include those at the municipal level (like the website of NDRC, as shown in the figure below); the range of information covers Fenghua City and Ninghai County where the subprojects under the Management Framework will be located.



The screenshot shows the website of the Ningbo Municipal Development and Reform Commission (NDRC). The header includes the logo and name of the commission, along with a search bar and navigation menu. The main content area displays a notice titled "World Bank Funded Ningbo Xiangshan Sustainable Urbanization Demonstration Project (Phase I)". The notice is structured as follows:

**World Bank Funded
Ningbo Xiangshan Sustainable Urbanization Demonstration Project (Phase I)**

一、建设项目名称和概要

- 1、项目名称：世行贷款宁波象山可持续城镇化示范项目（一期）
- 2、项目概要：为提升象山县城镇化建设水平，象山县拟利用世界银行贷款实施本项目，项目主要建设内容包括城市公共空间的改造、路网完善、公共交通水平的提升以及抗洪涝风险设施的提升等内容。

二、建设单位名称及联系方式

宁波市世界银行贷款项目管理办公室，宁波市江东区济和街118号，邮编：315040；联系人及电话：杨老师，87183215

象山县世行贷款项目建设管理办公室，象山县丹东街道建设路148号，邮编：315700；联系人及电话：吴老师，65724098

三、承担评价工作的环境影响评价机构的名称和联系方式

First EA Information Disclosure



Second EA Information Disclosure

8.2 CONSULTATION

On the morning of Nov. 20, 2015, Ningbo PMO held a Public Participation Symposium for EA for this Project. The representatives of Ningbo PMO, Fenghua, Ninghai and Xiangshan PIUs as well as representatives of grass-root governments and residents attended this event. Please refer to Table 8.2-1 for detail.

Table 0-1 List of Participators at Symposium

No.	Participators	Number
1	Ningbo PMO	3
2	Xiangshan PIU	1
3	Ninghai PIU	1
4	Fenghua PIU	1
5	Xikou Town Government	2
6	Xiwu Subdistrict	1
7	Changjie Town Government	1
8	Resident representative of Xikou Town	3
9	Resident representatives of Ninghai County	3
10	Resident representatives of Xiwu Subdistrict	4
No.	Participators	Number
11	Resident representatives of Changjie Town	3
12	NMRDIEP (EA institute)	2
13	SMEDI (design institute)	1
14	Huadong Engineering Corporation (design institute)	1



Symposium Photo

As feedback opinions of the symposium show, all the representatives of grassroots governments and residents (including both Fenghua and Ninghai) hope to participate in the implementation scope of the Bank funded demonstration project to improve their infrastructures like regional traffic and flood prevention facilities by reference of the Bank's advanced ideas and experiences so as to raise the urbanization level and liveability in the region.

Attachment 1 – Table of Contents for EIA and EMP

The proposed draft Table of Contents for EIR in the next stage is as follows:

- 1 General Principles
 - 1.1 Preface
 - 1.2 Bases for Preparation of EAIR
 - 1.3 Related Plannings and Their Relations to This Project
 - 1.4 Environmental Function Zoning
 - 1.5 Assessment Standards
 - 1.6 Level and Scope of Assessment
 - 1.7 Environmentally Sensitive Objects to Be Protected
- 2 Project Description
 - 2.1 Project Background
 - 2.2 Road Network Improvement Component
 - 2.3 Public Space Retrofit Component
 - 2.4 Public Transportation Component
 - 2.5 Flood Risk Management Component
 - 2.6 Survey on Associated Projects
- 3 Comparison of Alternatives
 - 3.1 Comparison of xx Route Alternatives
 - 3.2 Comparison of xx terminal station alternatives
 - 3.3 Comparison of xx Subproject Alternatives with and without it
- 4 Environmental and Social Status Quo
 - 4.1 Summary of Natural Environment
 - 4.2 Summary of Social Environment
 - 4.3 Monitoring and Assessment of Current Environmental Quality
- 5 Analysis of Environmental Impact during Construction Period
 - 5.1 Analysis of Construction Waste Gas Impact
 - 5.2 Construction Wastewater Impact Analysis
 - 5.3 Construction Noise Impact Analysis
 - 5.4 Analysis of Solid Waste Impact During Construction Period
 - 5.5 Analysis of Impact During Construction Period To Ecological Environment
 - 5.6 Impact to Social Environment
- 6 Projections and Assessment on Environmental Impact during Operation Period
 - 6.1 Projection and assessment on the impact to Acoustic environment
 - 6.2 Projection and Assessment on Impact to Atmospheric Environment
 - 6.3 Environmental Impact Assessment for Surface Water
 - 6.4 Solid Waste Impact Analysis
 - 6.5 Social Environment Impact Analysis
- 7 Public Participation
 - 7.1 Objective and Method for Public Participation
 - 7.2 Information Disclosure
 - 7.3 Public Participation and Outcomes

7.4 Sub-Conclusion

8 Environmental and Social Management Plan

8.1 Arrangements and Responsibilities of Organizations for Environmental Management

8.2 Environmental Impact Mitigation Measures

8.3 Environmental Monitoring Plan

8.4 Environment Training Program

8.5 Report and Complaint Mechanism

8.6 Social Impact Management Plan

9 Conclusions

Attachment 2 – Environmental Code of Practice

According to the national laws, regulations, codes and standards concerned and by reference to the Bank's Environment, Health and Safety General Guidelines, Water and Hygienic Environment, Health and Safety Guidelines, and EHS guidelines for toll roads, as well as by adequate reference to the similar projects implemented recently in the project region or the country, general environmental impact mitigation measures, i.e., Environmental Code of Practice (ECOP) are put forward for both construction and operation periods, which will be used for reference in future subproject/component EA/EMP. Please refer to the next table for details.

Environmental Code of Practice (ECOP)

Period	Main Activities	Major Negative Impacts	Mitigation Measures	Implementer	Supervisor
Pre-construction	Procurement via bidding	/	1) To put EMP into all bidding documents for civil works and construction supervision; 2) To put EMP into the contracts with contractors and CSCs for implementation.	PIUs	Ningbo PMO
	Environmental protection training		To invite environmental experts to provide training on environmental impact controlling measures and exercise supervision on relevant personnel.	Ditto	EPBs
Design and	Environmental impacts out of project scope adjustments		If major changes occur, environmental protection measures shall be put forward and incorporated into construction drawing design. If any significant negative impact on environment exists after the changes, PIA shall employ the environmental assessment unit once more for supplementary EA. The revised EIR shall be submitted to EPB for review and approval, and meanwhile, to the World Bank.		
		Alternative to be optimized by EA		Design institute should incorporate more reasonable alternative proposed in EIR into design if feasible.	Design institute

Environmental and Social Management Framework for Ningbo Sustainable Urbanization Demonstration Project

Period	Main Activities	Major Negative Impacts	Mitigation Measures	Implementer	Supervisor
	Information disclosure and public participation		<p>To minimize negative impacts on residents' life and urban traffic, traffic relief shall be well conducted during construction. To cooperate with traffic administrations to allow the public to know road traffic restriction information through mass media (TV, broadcast, newspaper and internet);</p> <p>2) Information signboards containing the information like project profile, construction schedule, hotline for feedback comments and complaints and the words hoping to get public's understanding shall be set on the construction site.</p> <p>3) As large amounts of water and power are in need, construction units shall contact with relevant departments to connect pipelines/cables or temporary pipelines/cables in advance. As to the areas lacking of water and power, water supply and power supply lines shall be installed in advance to prevent the water and power supplies from being sudden failures, which will exert negative impacts on the normal life and works of local residents, commercial and governmental organizations.</p>	Contractors	PIUs
	Construction raise dust, smell of dredging, etc.	Negative impacts on air quality within construction site and to the life and work of nearby residents	<p>1) Construction site shall be enclosed with solid, eye-pleasing barriers, the height of which shall be no lower than 1.80 m. Fine-mesh safety net shall be mounted 100% for external scaffolds;</p> <p>2) Building materials like cement, lime, etc. likely to cause raise dust in construction site shall be stored in warehouses and pools with covers. The ground surface within 5 m from the entrance and exit of construction site and main passages on site shall be hardened;</p> <p>3) Waste soil and other construction waste shall be timely collected and transported out. Those unable to be timely cleared and transported out shall be stacked collectively at designated place on site. Solidification, coverage and greening measures shall be taken for 100%;</p> <p>4) All vehicles going out of the construction site shall be washed and all vehicles conveying construction soil and small particle materials shall be completely enclosed;</p>	Contractors	CSCs, local EPBs

Environmental and Social Management Framework for Ningbo Sustainable Urbanization Demonstration Project

Period	Main Activities	Major Negative Impacts	Mitigation Measures	Implementer	Supervisor
		<p>Negative impacts on air quality within construction site and to the life and work of nearby residents</p>	<p>5) Commodity asphalt concrete shall be applied and no temporary mixing station is allowed to be set on construction site; 6) Commodity concrete shall be applied where possible. Deduster shall be equipped for less on-site mixing operation; 7) Dredging operation shall be conducted in daytime where possible. Sludge shall be timely transported to a designated disposal field. Drying field shall be set far away from residential area. If a river reach is near a residential area, notification shall be delivered to the residents in advance to acquire their understanding; 8) Lower sulfur contained gasoline (< 0.02%) and diesel (< 0.035%) shall be fueled to construction machines and vehicles and daily maintenance of them shall be enhanced to avoid their tail gases exceeding standard limits.</p>		
	<p>Constructional machine operations, vehicle transportation, pile foundation construction etc.</p>	<p>Noise impact on nearby surroundings</p>	<p>1) To strengthen construction management and make reasonable arrangement on construction time and duration. For the construction needs to be conducted in nighttime, <i>Night Construction Permit</i> shall be handled as required and notification shall be delivered to the residents nearby to acquire their understanding; 2) To optimize construction schemes, and apply advanced construction process and low-noise equipment. High-noise construction machines shall be arranged far away from residential areas and schools or isolated in sound insulation work shed to mitigate their impact; 3) To strengthen regular equipment maintenance and standardize the operation specifications to reduce abnormal equipment noise; 4) Temporary noise-reducing construction barriers (like color steel plate and solid wall, etc.) with suitable heights shall be erected adjacent to sensitive objects; 5) To intensify management on transportation vehicles on construction site to reduce the number of vehicles and traffic flow rate as well as forbid vehicle honking. Vehicle entrance</p>	<p>Contractors</p>	<p>CSCs, local EPBs and UMBs</p>

Environmental and Social Management Framework for Ningbo Sustainable Urbanization Demonstration Project

Period	Main Activities	Major Negative Impacts	Mitigation Measures	Implementer	Supervisor
			and exit on construction site shall be arranged on a side far away from sensitive spots.		
	Washing of construction machines and vehicles	During construction activities, wastewater and pollutants enter into surface waters or sewers	<p>Washing area shall be set with hardened and anti-seepage ground; collecting gutter and oil separation tank shall be set around the washing area. Wastewater after oil separation and sedimentation disposal shall be sent back to the construction site for dust suppression;</p> <p>2) Temporary septic tank and oil separator shall be set in constructors' living area. Domestic sewage after pretreatment shall be discharged into municipal sewers. Where the sewer is not available, the sanitation agency shall be entrusted for regular suction;</p> <p>3) Collecting gutters shall be set up around construction site to divert constructional muddy water into sedimentation tanks for sedimentation disposal.</p>	Contractors	CSCs, local EPBs and UMBs
Construction Period	Solid waste produced in subgrade construction, water-courses and sewer dredging and other operations	solid waste impacts on environment	<p>According to the <i>Construction Waste Management Provisions of Ningbo</i>, contractors shall prepare construction waste disposal plans and submit them to UMBs for filing before start of construction. Construction waste shall be recycled first where possible. Unusable waste shall be transported outside for disposal by the entities with relevant operation and service qualifications for construction waste business;</p> <p>2) Sludge should be preferably used for farming and landscaping, etc. Where impossible, reasonable environmentally friendly disposal measures shall be adopted;</p> <p>3) Local sanitation agency shall be entrusted to timely collect and transport domestic garbage of constructors.</p>	Contractors	CSCs, local EPBs and UMBs

Environmental and Social Management Framework for Ningbo Sustainable Urbanization Demonstration Project

Period	Main Activities	Major Negative Impacts	Mitigation Measures	Implementer	Supervisor
	Temporary and permanent land occupation for	Impacts on ecological landscape and vegetations	To strictly control land occupation for construction, construction processes with less land occupation shall be adopted to reduce occupation space of hilly areas and forest lands; 2) Construction excavation volume shall be reduced, and reasonable allocation made in excavation and filling and protective measures taken in temporary stacking yard to avoid water and soil losses caused by rainwater; 3) During construction, attention shall be to protecting adjacent vegetations. Trees and bushes in the adjacent areas shall be transplanted to safe areas elsewhere if possible. After completion of construction, the temporary occupied land shall be timely restored to the original state or landscaped. Vegetation losses caused by permanent occupation shall be ecologically compensated with new greenbelts.	Contractors	CSCs, local WRBs and AFBs
	Vehicle emission	Impacts on sensitive objects beside road	Inspection and maintenance on in-use vehicles shall be enhanced and motor vehicles which emit excessive exhaust shall be forbidden to pass through; 2) The greening shall be enhanced on both sides of road to purify vehicle tail gas; 3) Cleaner fuel should be recommended for use.	Design institute, TPBs	PIUs
	Traffic noise		1) Rational planning of land uses on both sides of road shall be worked out to control the distance between sensitive buildings and noise sources. In the planning, commercial and industrial buildings shall be arranged at the first row along road. 2) Low-noise pavement shall be applied and pavement maintenance shall be conducted well; 3) In sensitive sections, vehicle noise control shall be intensified by limiting the speed, forbidding vehicle honking, etc.	Local planning bureau, design institute, TPBs	PIUs and local EPBs
	Domestic sewage	Its impacts on environment	After being pretreated via oil separation and septic tank, the domestic sewage will be discharged into municipal sewers. Finally, which shall be transmitted to an urban WWTP for	Operaton units	Local EPBs

Environmental and Social Management Framework for Ningbo Sustainable Urbanization Demonstration Project

Period	Main Activities	Major Negative Impacts	Mitigation Measures	Implementer	Supervisor
	discharge		treatment and be discharged after the effluent water quality meets the standard.		
	Solid waste discharged in bus terminals	Its impacts on environment	Local sanitation agency shall be commissioned for regular collection, transportation and disposal.	Operaton units	Local UMBs
	Ecological protection measures		Greenbelts are set on both sides of road. It is suggested that sculptures and landscaping mini-works be set at crossings, unoccupied land between street and buildings if applicable, which can not only improve the urban environment, beautify the road landscape but also raise the quality of city and strengthen the affinity of the city;	Design institute, contractors and PIUs	PIUs
	Environmental acceptance for completed facilities		Project implementation agencies shall entrust relevant qualified units to prepare the investigation/monitoring reports on the environmental acceptance for the completion of the subprojects within three months prior to their formal operations.	PIUs	local EPBs

**World Bank-financed Ningbo Sustainable Urbanization
Project**

Resettlement Policy Framework

Ningbo Municipal Government

January 2016

Abbreviations

AAOV	-	Average Annual Output Value
AH	-	Affected Household
AP	-	Affected Person
HD	-	House Demolition
LA	-	Land Acquisition
LEF	-	Land-expropriated Farmer
M&E	-	Monitoring and Evaluation
PMO	-	Project Management Office
PRC	-	People's Republic of China
RAP	-	Resettlement Action Plan
RPF	-	Resettlement Policy Framework

Units

Currency unit	=	CNY
CNY 1.00	=	\$0.15
1 hectare	=	15 mu

A. Background

In recent years with rapid economic and social development in Ningbo City, import and export trade and population flow have increased tremendously. However, urban transportation infrastructure and flood risk control remains weak, reflected by traffic congestion, serious roads rundown and damages, unsound road landscaping and poor drainage facilities. In view of this, the Ningbo Municipal Government has applied for a loan with the Bank to implement the Ningbo Sustainable Urbanization Project (hereinafter, the “Project”). In order to ensure that the production level and living standard of the affected persons (APs) is not reduced during and after construction, and equally benefit from the Project, the implementing agency, PMO, and RAP preparation agency have prepared this resettlement policy framework (RPF) jointly.

The implementation of subsequent resettlement activities will be reflected in external M&E reports.

B. Objectives of Resettlement, Definitions and Key Principles

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. APs should be meaningfully consulted and should have opportunities to participate in planning and implementing resettlement programs.
- APs 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.

This RPF defines the principles and objectives of resettlement, and appropriate guidelines, rights, and legal and institutional framework, compensation and restoration patterns, participation characteristics, and appeal procedure for resettlement, and is used to guide compensation, resettlement and restoration matters.

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).

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 date, 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.

The key principles of this RPF are as follows:

- Avoiding or minimizing LA, especially the occupation of high-grade farmland;
- Avoiding the demolition of residential houses;
- Using unused land where possible; and
- Avoiding or minimizing the occupation of environmentally sensitive areas.

C. Preparation and Approval of the RAP

The preparation and implementation of a RAP (including the payment of all resettlement costs) will be the responsibility of the borrower. Ningbo PMO and the relevant county PMOs are fully responsible for the Project.

The RAP will cover the following (if relevant), and anything unrelated to the Project should be specified in the RAP:

- 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;
- 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 third-party settlement of disputes arising from resettlement;
- Organizational responsibilities;
- Implementation schedule;
- Costs and budget;
- M&E.

On the basis of the Operational Policy on Involuntary Resettlement (OP4.12), a RAP covers the following minimum elements:

- 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.

The RAP should be completed no later than 4 months before the starting date of resettlement, and submitted to the Bank for consideration at least 3 months before that. Only after the Bank has accepted the RAP can compensation, resettlement and restoration activities begin. Such activities should be completed before the commencement of civil engineering.

D. 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, Zhejiang Province, and the project cities/counties.

The PRC has developed a complete legal framework and policy system on land acquisition, house demolition, 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 land acquisition, house demolition, resettlement and compensation work. The city/county governments

have promulgated local regulations and policies in accordance with the applicable state laws and policies to manage and direct relevant local work.

The key laws, regulations and ordinances of the PRC, and Bank policies used to prepare this RPF and ensure its legal validity include:

Table 1 Policy Framework

Level	Policy document	Effective date
State	Land Administration Law of the PRC	2004-8-28
	Real Right Law of the PRC	2007-10-1
	Regulations on the Implementation of the Land Administration Law of the PRC (Decree No.256 of the State Council)	1998-12-27
	Notice on Adjusting the Policy for the Compensated Use of Additional Construction Land	2009-1-1
	Notice of the Ministry of Land and Resources on Doing a Practical Job in Compensation for Land Acquisition	2004--
	Guidelines on Improving Compensation and Resettlement Systems for Land Acquisition (MLR [2004] No.238)	2004-11-3
	Regulations on the Expropriation of Houses on State-owned Land and Compensation Therefor	2001-1-21
	Notice of the Ministry of Land and Resources on Doing a Better Job in Land Acquisition Management	2010-6-28
Local	Measures of Zhejiang Province for the Implementation of the Land Administration Law of the PRC	2000-7-5
	Notice on Strengthening and Improving Land Acquisition Work(ZPG [2002] No.27)	2002-12-3
	Guidelines of Zhejiang Province on Further Regulating the Management of Village-level Land Reserved for Resettlement (ZPLRD (2006))	
	Measures of Zhejiang Province for Compensation for Land Acquisition and Basic Living Security for Land-expropriated Farmers (Decree No.264 of the Zhejiang Provincial Government)	2010-1-1
	Regulations of Zhejiang Province on Master Land Utilization Planning	2011-7-1
	Notice of the Zhejiang Provincial Government on Re-promulgating the Provincial Minimum Living Standard of Compensation for Land Acquisition (ZPG [2012] No.2)	
	Measures of Zhejiang Province for the Implementation of Farmland Occupation Land (ZCNSZ [2008] No.17)	
	Opinions of the Zhejiang Provincial Government on Promoting the Redevelopment of Urban Low-efficiency Land Comprehensively (ZPG [2014] No.20)	2014-5-5
	Notice of the Zhejiang Provincial Government on Adjusting Compensation and Resettlement Policies for Land Acquisition (ZPG [2014] No.19)	2014-4-29
	Regulations of Ningbo City on Compensation, Subsidies and Rewards for the Demolition of Houses on State-owned Land (NMG[2015] No.28)	2015-3-19
	Regulations of Ningbo Municipality for the Demolition of Houses on Acquired Collective Land	2006-1-1
	Rules of Ningbo City for the Implementation of House Demolition on Collective Land	2006-12-1
	Notice of the Ningbo Municipal Government on Issuing the Interim Measures for Endowment Insurance for Land-expropriated Farmers (MPG [2002] No.125)	2002-11-11
	Notice on Adjusting Basic Endowment Insurance Benefits for Urban and Rural Residents of Ningbo City (NMLSSB [2015] No.48)	2015-1-1
Bank	Operational Policy OP4.12 on Involuntary Resettlement and appendixes	2002-1-1
	Bank Procedure BP4.12 on Involuntary Resettlement and appendixes	2002-1-1

In order to achieve the above objectives, this resettlement policy framework has quoted the principles summarized in OP/BP4.12 of the World Bank, specified as follows:

(a) The resettlement work will be implemented based on the socioeconomic survey and affected quantity statistics, and in accordance with national and local resettlement policies and regulations, as well as the Involuntary Resettlement Business Policy OP/BP4.12 of the World Bank.

(b) The project design will be optimized to minimize the resettlement work. The populous area will be excluded as much as possible, so as to minimize the involuntary resettlement. The construction scheme will be optimized to reduce disturbance to the public.

(c) All compensations for involuntary resettlement will be regarded as a part of this project. Sufficient fund will be provided to the relocated people, so as to ensure they can benefit from this project.

(d) It will be guaranteed that all the affected people can receive all the compensations for the resettlement loss before the implementation of the project. Their daily life will be properly arranged, and their production will be effectively restored. Subsidies and assistance will also be given to solve their temporary difficulties.

(e) It will be guaranteed that the living standard, production capacity and income level of all the affected people can recover to their original level or even increase to some extent.

(f) The compensation for the demolished structures, specialized facilities and land attachments will be calculated according to the replacement price. The residual value of demolished materials cannot be deducted, nor can the depreciation of original property.

(g) Both physical resettlement and monetary resettlement will be offered to the affected people for them to choose freely.

(h) The relocated people will receive compensation during the transition period and relocation process.

(i) The relocated non-residential units will receive relocation subsidy and compensation for production and business suspension.

(j) Special attention will be given to the vulnerable group, helping them select the resettlement houses and move into the new houses.

(k) Compensation will be given to the owners of the infrastructure for the relocation and restoration of infrastructure affected by the project.

(l) Reasonable compensation will be given to the to-be-acquired land and related losses.

(m) The compensation for the to-be-acquired land will be paid within three months starting from the date when the resettlement plan is approved, no later than the date when the land is used for construction purpose.

(n) During the preparation and implementation stage of resettlement work, the relocated people will be encouraged to participate in the process, so as to solicit their suggestions for the resettlement work and publicize the resettlement policy in time.

(o) Great attention will be given to the complaints of affected people. Timely assistance will be given to them to solve the difficulties and inconvenience during the resettlement process. The disputes on the compensation rate will be solved through consultations as far as possible. If consultation fails, it can be submitted for arbitration.

(p) Units involved in the resettlement work will enhance cooperation and coordination among each other. Resettlement organizations at all levels will be established, and all the employees will be well trained.

(q) During the implementation process of the resettlement work, any major changes, including

the alteration of compensation rate, alteration of relocated position and scale, adding new items, etc., will be reported to the World Bank in advance.

Considering that there are some gaps between the domestic resettlement policy and the Bank's OP4.12, during the resettlement implementation stage of projects covered by this RPF, PMO will adopt good practices and policy from the Bank on the basis of domestic laws. Below is a description of policy gaps between PRC and the World Bank, and guidance on which policies to be implemented.

Table 2 Gaps between China and the World Bank's policy and Measures in This Project

	Policy of China	Policy of the World Bank	Policy to be followed
Goal	Guarantee the construction project can be finished in time and effectively, ensure social stability and harmony.	Avoid or minimize involuntary resettlement as far as possible; ensure living standard of project affected persons is not lower than before.	Carry out the Bank's policy
Compensation approach	Land acquisition is generally compensated by currency, supplemented by employment assistance and social security. The following resettlement approaches are available to the households affected by the demolition of rural residential houses: 1. Cash compensation; 2. Housing land + self-built houses. The project owner will offer housing land for relocation and conduct land leveling and constructing infrastructure for AHs. 3. Resettlement housing. When resettlement house is chosen as compensation mode, the location and type of resettlement house have been determined.	Replacement land shall be provided for population depending on land as main source of income in the case of land acquisition. Affected people have their own right to choose mode of compensation, including cash compensation, replacement housing, or land + self-built houses. The project should provide land leveling and basic infrastructure for AHs. Location of the resettlement house should be chosen freely by the relocated persons.	Carry out the Bank's policy
Calculation method of compensation fees	Take the market price of house that of the same type and purpose at the same district as the compensated price.	The price shall be calculated based on estimated replacement cost, without considering depreciation.	Replacement housing should be used if chosen by APs. Full market price for new houses should be used if cash compensation is selected by APs. Total compensation will include market price plus all transaction cost to match replacement cost.
compensation for illegal building	No compensation shall be provided for illegal buildings.	Compensation is provided for illegal buildings.	Those occupied affected houses before cut-off date are entitled to full compensation.
Public participation	Public participation system is not sound enough, public can only participate in some phases of the project implementation.	A complete and sound public participation process should be followed, during the full process of impact assessment and determination of	Wide public consultation should be ensured for APs to participate in impact assessment, alternatives

	Policy of China	Policy of the World Bank	Policy to be followed
		compensation mode, and implementation of LA and resettlement.	identification, and implementation of resettlement work.
Monitoring arrangement	Internal management mechanism of project owner and resettlement implementation agency conducts the monitoring process.	Including internal monitoring from the internal management mechanism of project owner and resettlement implementation agency and external monitoring from the external independent monitoring unit.	Set up external and internal monitoring systems as required by the Bank.
Grievance mechanism	Set up specialized agency to accept public grievance.	Public can appeal through multiple channels and ways, including community, sub-district, project owner, external monitoring agency, etc.	Set up grievance mechanism as required by the Bank.

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 accept that remedies defined in the RAP is rational.

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: (1)increase cultivated area if land is available; (2)improve agriculture through irrigation, etc.; and (3)develop nonagricultural income. Like fixed assets, affected young crops, fruit and commercial forests will be compensated for at 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;
- Timely and rational skills training will be offered to the APs to improve their agricultural and nonagricultural skills, and enhance their ability to earn income.
- Jobs will be offered to the APs, including public welfare jobs, jobs offered under the Project, jobs in industrial parks, etc., and unskilled jobs will be first made available to local laborers to create income-generating opportunities.

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

- Demolished residential houses may be subject to either property swap or cash compensation, and eligible AHs may also be subject to relocation. AHs have the right to choose modes of compensation and resettlement.
- Replacement housing will be calculated on the basis of appraised market price, which includes construction and installation cost of the houses ready for move in, plus all transaction cost. In all cases, the replacement houses will have bigger spaces than the demolished houses and with location comparable to the demolished houses in terms of access to key social services such as shopping, schools, and hospitals etc.
- Cash compensation will be based on replacement cost.
- All facilities and services will be reconstructed or restored, such as roads, water supply, power supply, telephones, cable TV and schools.
- The displacer will provide transition housing or transition subsidies before APs moving in new houses.

Proposed compensation rates:

According to the survey and the applicable policies of Ningbo city, the possible compensation rates are as follows:

I. Compensation rates for LA

➤ **Compensation rates for permanently acquired collective land**

According to the Measures of Zhejiang Province for Compensation for Land Acquisition and Basic Living Security for Land-expropriated Farmers Decree No.264 of the Zhejiang Provincial Government), Notice of the Zhejiang Provincial Government on Adjusting Compensation and Resettlement Policies for Land Acquisition (ZPG [2014] No.19), Regulations of Xiangshan County on Compensation and Resettlement for Land Acquisition (XCG [2014] No.140), Notice of the Fenghua Municipal Government on Adjusting and Improving Compensation Rates for Land Acquisition (FMG [2014] No.174), and Notice on Reissuing Compensation Rates for Land Acquisition of Ninghai County (NMG [2012] No.17), the LA compensation rates of the Project are as follows:

Table 3 Location-based Composite Land Prices for LA of Xiangshan County

Area	Land type	Location-based composite land price (0,000 yuan/mu)		
		Amount	Land compensation	Resettlement subsidy
Tier-1	Type 1: cultivated land, construction land, garden land, other farmland	6.0	3.0	3.0
	Type 2: woodland, unused farmland	3.0	1.5	1.5
Tier-2	Type 1: cultivated land, construction land, garden land, other farmland	5.3	2.65	2.65
	Type 2: woodland, unused farmland	2.65	1.325	1.325
Tier-3	Type 1: cultivated land, construction land, garden land, other farmland	4.6	2.3	2.3

Area	Land type	Location-based composite land price (0,000 yuan/mu)		
		Amount	Land compensation	Resettlement subsidy
	Type 2: woodland, unused farmland	2.3	1.15	1.15

2) The LA compensation rates of Fenghua City are as follows:

Table 4 Location-based Composite Land Prices for LA of Fenghua County

Area	Land type	Location-based composite land price (0,000 yuan/mu)		
		Amount	Land compensation	Resettlement subsidy
Tier-1	Type 1: cultivated land, construction land, garden land, other farmland	6.0	3.0	3.0
	Type 2: woodland, unused farmland	4.5	1.5	3.0
Tier-2	Type 1: cultivated land, construction land, garden land, other farmland	5.4	2.4	3.0
	Type 2: woodland, unused farmland	4.2	1.2	3.0
Tier-3	Type 1: cultivated land, construction land, garden land, other farmland	4.6	1.6	3.0
	Type 2: woodland, unused farmland	3.8	0.8	3.0

3) The LA compensation rates of Ninghai County are as follows:

Table 5 Location-based Composite Land Prices for LA of Ninghai County

Area	Township/sub-district	Within/out of planning area	Land type	Location-based composite land price (0,000 yuan/mu)		
				Amount	Land compensation	Resettlement subsidy
Tier-1	Yuelong, Taoyuan, Meilin, Qiaotouhu	Within planning area	Cultivated land	5.4	2.44	2.96
			Woodland, unused land	2.7	1.22	1.48
		Out of planning area	Cultivated land	4.86	2.18	2.68
			Woodland, unused land	2.43	1.09	1.34
Tier-2	Huangtan, Qiangjiao, Xidian	Within planning area	Cultivated land	4.5	2.02	2.48
			Woodland, unused land	2.25	1.01	1.24
		Out of planning area	Cultivated land	4.06	1.82	2.24
			Woodland, unused land	2.03	0.91	1.12
Tier-3	Shenzhen, Changjie, Liyang, Chayuan, Chalu, Qiantong, Dajiahe	Within planning area	Cultivated land	4	1.76	2.24
			Woodland, unused land	2	0.88	1.12
		Out of planning area	Cultivated land	3.6	1.6	2
			Woodland, unused land	1.8	0.8	1
Tier-4	Huchen, Yishi, Yuexi, Sangzhou	Within planning area	Cultivated land	3.6	1.6	2
			Woodland, unused land	1.8	0.8	1
		Out of planning area	Cultivated land	3.24	1.46	1.78
			Woodland, unused land	1.62	0.73	0.89

➤ **Compensation rates for attachments**

The ground attachments and structures affected by the Project will be compensated for at appraised price.

➤ **Compensation rates for temporary land occupation**

According to the feasibility study report, some collective land will be used temporarily to store building materials, park vehicles, etc. at the construction stage, but positions and size cannot be fixed for the moment. Through consultation with the owner, agencies concerned and affected village committees, the owner will negotiate compensation rates for young crops on temporarily occupied land with the affected village committees and households, and grant compensation based on the actual period of occupation.

II. Compensation rates for HD

The HD compensation rates of the Project have been fixed in accordance with the Regulations of Ningbo Municipality for the Demolition of Houses on Acquired Collective Land, and the Rules of Ningbo City for the Implementation of House Demolition on Collective Land as follows:

➤ **Rural residential houses**

Resettlement modes: The following resettlement modes are available to the households affected by the demolition of rural residential houses:

1. Cash compensation

Cash compensation will be paid to households who selected cash compensation to purchase houses on their own. The compensation rate for the demolished house should be based on the average price of local commercial housing of the same type and size when purchased new as replacement cost. The demolished house should be compensated for at full replacement cost. The displacer should pay cash compensation to the AH within 30 days after entering into an HD compensation agreement with the AH.

2. Housing land + Self-built house

For AHs who selected housing land plus compensation for self-building houses, the displacer will offer housing land for relocation and construction according to village development plans, assist AHs in relocation and construction approvals, and issue grant compensation at full replacement cost for building replacement houses by AHs themselves.

Site selection, site preparation, and relocation: 1). In places where land for housing construction is available, township leading groups headed by township heads, and composed of township and village officials and PAP representatives should be established, and hold meetings regularly to solve issues in housing land selection, construction approvals, funding, etc.; 2) land for housing construction should be selected in consultation with the AHs, and in places with convenient transportation; and 3) The AHs should participate in housing land selection, allocation and leveling.

The following procedures will be followed: 1) a leading group will be established comprising representatives from township land bureau, township finance bureau, village committee, and project affected households; 2) land allocation will be the responsibility of the land bureau to select replacement housing construction sites comparable to previous houses in terms of basic infrastructure, connectivity to neighboring communities, schooling and market etc., with agreement from project affected households; 3) the leading group will carry out consultations with PAPs to reach agreement on replacement housing construction sites; 4) once construction sites are finalized, resettlement compensation will be agreed based on investigation and appraisal of previous houses and entitlements; 5) the leading group will coordinate communications between resettlement staff of the project and PAPs, and ensure timely payment of replacement land compensation including all transaction cost; 6) the leading group will supervise land leveling, provision of basic infrastructure such as roads, water and electricity, and conduct planning of replacement housing construction; 7) PAPs will select experienced representatives to participate in planning and provision of basic infrastructure; 8) during the process of selecting replacement housing land, project owner is responsible for providing PAPs with information with regard to high quality local designers and

assisting housing design.

Table 6 Relocation Procedures and Timetable

Activity	Remarks and timing
Initial assessment of impact caused by required relocation/resettlement caused by project design, including alternative analyses.	PAPs should be consulted during assessment.
Once project activities finalized after assessment of alternatives, detailed impact assessment covering all affected households.	Learning the APs' opinions and suggestions through adequate public participation
Drafting of Resettlement Action Plan if required by OP4.12, and first draft disclosed in local papers and public places.	First disclosure of draft RAP should allow at least 6 months for feedback before project construction commence. RAP should be submitted to and accepted by WB task team.
All compensation payments will be paid before the project commences. Land acquisition will not take place until compensation is paid and, resettlement sites and moving allowances are provided.	Land acquisition will not take place until compensation is paid and, resettlement sites and moving allowances are provided.
Reach agreements with affected households, including detailed items such as cash or replacement housing compensation.	AHs should be given full information and free selection of compensation methods. Cash compensation should be transferred to affected villages no later than 30 days from signing contracts.
Basic infrastructure provision if AHs selected construction of housing by themselves, including but not limited to land leveling, water, electricity, and gas.	Land leveling should start no later than 4 weeks from signing of contracts.
Payment of transition cost.	Transition cost should be paid no later than 2 weeks from contract signing if replacement resettlement housing is selected as mode of compensation. Transition cost should be paid before final moving in, and rate will increase based on local practice.
Final acceptance and move-in	Progress will be monitored by commissioned external monitoring team and captured in 6-monthly external monitoring reports submitted and accepted by WB. Overall time for provision of resettlement housing should be no later than 6 months before project closing date.

The following conditions should be met in the selection of housing land: 1) complying with the applicable state, provincial, municipal and county regulations; 2) selecting housing land within village groups in principle, or reallocating land from other village groups if necessary at a location not worse than that of the former housing land; 3) selecting housing land through consultation with AHs.

For the AHs choosing the housing land + self-construction mode, the displacer and the agencies concerned should be responsible for land preparation and basic infrastructure provision to make the land ready for house construction. First, the displacer should level the land used for building houses. Second, the housing land should be provided with necessary roads, and sewers, water supply pipelines, power lines and electricity, septic tanks, etc. constructed as necessary. All facilities should be functioning and ready for use. In addition, the implementation agency may offer assistance in house design to the AHs, such as offering information on multiple design agencies.

3. Resettlement housing

In case of resettlement housing is selected as compensation mode, the AHs should enjoy the rights to choose available resettlement houses. The size of resettlement houses should follow local regulations as calculated by minimum square meters per capita, but not smaller than their original house. In case bigger size is selected by AHs, the portion of the building area of the resettlement house above the building area entitled to should be compensated for at the average price of local

commercial housing of the same type. The building area exceeds what is entitled to should be less than 250 m².

The resettlement site has been compared with the former site in terms of house quality, living environment, infrastructure, public services, employment, income increase, etc. The new site has advantages in these aspects.

Table 7 Comparison between Old and New Sites

Type	Old site	New site
House quality	Houses are old, mostly in masonry concrete, masonry timber and simple structures, with potential risks.	New houses are in masonry concrete structure and of good quality.
Living environment	Pollution by MSW is serious.	There is no MSW pollution.
Infrastructure	Roads are obstructed. There are no landscaping, lighting, drainage and MSW collection facilities.	Roads, and landscaping, lighting, drainage and MSW collection facilities are planned.
Convenience of public services	Usually no bus stops nearby, and the site is far away from hospitals, schools and commercial centers.	The new site is closer to bus stops, hospitals, schools and commercial centers.
Employment and income increase	Villagers deal with farming and outside employment mainly.	Villagers may lease houses or do business to increase income due to the better geographic location.

Other subsidies: The AHs will also receive the following subsidies:

Transition subsidy will be paid to AHs for the whole duration between leaving their old houses and moving into the new houses. If the displacer offers transitional housing and accepted by AHs, no transition subsidy will be paid. If the displacer fails to offer resettlement housing at the agreed date, it shall either offer transitional housing plus transition subsidy at the rate stated by local policy, or pay the standard transition subsidy plus additional supplementary subsidy.

In the case of cash compensation as resettlement mode, the displacer should pay a transition subsidy for 6 months at the specified rate from the date on which the HD compensation agreement is entered into and the HD compensation is paid.

➤ **Rural non-residential properties**

- Any demolished non-residential property subject to cash compensation should be compensated for at local appraised price. If any demolished non-residential property complies with the master land utilization plan, township and village development plans, or other conditions specified by the municipal and county governments, it may also be subject to relocation.
- In case of cash compensation, the demolished non-residential property should be compensated for at local appraised price recommended by a real estate appraisal agency through market comparison or based on cost.
- In case of relocation, 1) the displacer should offer land for relocation based on the village and township development plans; 2) they should be responsible for water and power supply, road construction and land leveling, or pay for the same services; 3) the displacer should assist the affected entity in going through the land use, house construction and planning formalities; and 4) the demolished property will be compensated for at replacement cost.
- If any entity is affected by production or business suspension, and needs relocation and transition due to the demolition of its non-residential property, the displacer should grant one-

time compensation based on the building area, purpose and location of the demolished property, and the entity's business status.

➤ **Social security**

1. Policy on pension insurance for urban and rural residents

According to the Opinions of the Ningbo Municipal Government on Further Improving the Pension Insurance System for Urban and Rural Residents (NMG [2015] No.1), and the Notice on Adjusting Basic Endowment Insurance Benefits for Urban and Rural Residents of Ningbo City (NMLSSB [2015] No.48):

1) Eligibility

Urban and rural residents with local registered residence, having attained 16 years (except active students), other than civil servants, staff of public institutions and social organizations, and not covered by basic pension insurance, may be eligible for enrollment in pension scheme in their residential area.

2) Funding

The funding of pension insurance for urban and rural residents consists of individual contribution, collective subsidy and government subsidy:

1) Individual contribution: If the insured is less than 60 years, he/she will choose a contribution level based on personal and household scheme. Currently, 8 contribution levels are available: 100 yuan, 300 yuan, 500 yuan, 800 yuan, 1,100 yuan, 1,400 yuan, 1,700 yuan and 2,000 yuan per annum.

b) Collective subsidy: Any financially abundant village collective may grant a subsidy to the insured members as determined at a village meeting. Other social economic and public welfare organizations, and individuals are encouraged to grant financial support to the pension scheme.

c) Government subsidy: local governments are encouraged to provide subsidies based on fiscal conditions. The standard for subsidy is: 60 yuan per capita per annum if contribution level is 100 or 300 yuan, 200 yuan per capita per annum if contribution level is 500, 800 or 1,100 yuan, or 300 yuan per capita per annum if contribution level is 1,400, 1,700 or 2,000 yuan.

3) Individual account

The pension insurance management agency will establish an individual account for all enrolled members. All individual contributions, collective and government subsidies, and other donations will be credited to the individual accounts

4) Benefit and eligibility

a) Benefit: The benefit of basic pension insurance for urban and rural residents consists of a basic pension, an individual account pension and a contribution period pension, and will be paid on a lifelong basis.

Basic pension is 210 yuan per capita per month in urban districts, and may be fixed based on local conditions.

Monthly individual account pension is the balance of the individual account divided by 139.

Contribution period pension is based on contribution period, being 30 yuan if contribution period does not exceed 16 years, to be increased by 5 yuan per annum from the 16th year.

The insured will receive a one-time funeral subsidy upon death at 20 times the basic pension of the month of death.

b) Eligibility for payment from pension

The insured with local registered residence, having attained 60 years and paid contribution for 15 years, and not receiving any pension under basic pension insurance from employers, or any retirement pension from any state organ, public institution or social organization may receive a

pension monthly.

2. Pension insurance for Land Loss Farmers

According to the Notice of the Ningbo Municipal Government on Issuing the Interim Measures for Pension Insurance for Land-expropriated Farmers (MPG [2002] No.125), the Rules of Ningbo City for the Implementation of Endowment Insurance for Land-expropriated Farmers (NMLSSB [2002] No.267), and the Notice on Adjusting Benefits and Contribution Levels of Endowment Insurance for Land-expropriated Farmers (NMLSSB [2013] No.135), eligible Land-expropriated Farmers (LEFs) under the Project may enroll in pension insurance for LEFs.

1) Eligibility:

- a) Registered agricultural population in administrative villages approved for village-to-community transformation;
- b) Members of households with all or most of land acquired as approved by county-level or above land and resources authorities.

2) Eligibility for pension and pension levels:

- a) The insured must paid pension insurance in full, and attained 60 years for men or 55 years for women to receive pensions monthly.
- b) The monthly pension levels include 650yuan, 600yuan and 550yuan, which correspond to different contribution levels.

3) Contribution levels

- a) LEFs will get insured and pay contributions at one of the 3 levels (62,600, 45,600 and 28,600 yuan) voluntarily. Levels cannot be changed once chosen. See Table 5.
- b) LEFs will usually get insured in villages or community committees. Pension insurance contribution should be paid at a time in principle. Payment by installment is allowed in special cases, where the first installment should not be less than 50% of the total amount, and any subsequent annual installment not less than 10% plus current interest.

Table 8 Contribution Levels of Pension Insurance for LEFs and Corresponding Pensions in Ningbo city

Contribution level		Level 1	Level 2	Level 3
Amount of contribution (yuan)	Age (years)			
60-61 years	55-56 years	58370	42770	27170
61-62 years	56-57 years	54340	40040	25740
62-63 years	57-58 years	50210	37310	24310
63-64 years	58-59 years	46180	34580	22880
64-65 years	59-60 years	42150	31850	21450
65-66 years	60-61 years	38120	29120	20020
66-67 years	61-62 years	34190	26390	18590
67-68 years	62-63 years	30160	23660	17160
68-69 years	63-64 years	26130	20930	15730
69-70 years	64-65 years	22100	18200	14300
70 years or above	65 years or above	18070	15470	12870

➤ **Employment**

The Project will provide farmers with appropriate jobs. The owner will offer employment information and other employment assistance to them, including placement to public welfare jobs and jobs generated by the Project, and development on reserved collective land, including:

1. Public welfare jobs

The local county and city governments will make additional public welfare jobs first available to LEFs, including municipal, landscaping, cleaning and security jobs, in order to reduce their income losses, and restore their production level and living standard.

2. Jobs under the Project

The jobs generated at the construction stage will be first made available to the APs. The permanent jobs after project completion, such as cleaning and landscaping, will also be first made available to the APs to promote their employment.

➤ **Skills training**

In order to help LEFs get employed or startup businesses independently after receiving training, skills training programs will be developed tailored to market needs. Qualified trainees will be granted certificates of qualification.

➤ **Supporting measures for vulnerable groups**

Supporting measures will be taken by the owner, agencies concerned, township governments and village committees for vulnerable groups affected by the Project:

1) Priority in employment

Vulnerable population able and willing to work will have priority in receiving jobs under the Project or public welfare jobs offered by the county government.

2) Skills training

Vulnerable population able and willing to work will receive skills training on house-keeping, computer, animal husbandry, etc. in order to become employed.

3) Social security

Eligible vulnerable residents (e.g., the disabled and low income residents) affected by the Project will be included in the local Minimum Living Standards (MLS) system and receive an MLS benefit monthly.

4) Assistance in relocation

Vulnerable population with almost no ability to work will be provided assistance in relocation by agencies concerned and village collectives, including furniture relocation, new house cleaning, etc.

➤ **Supporting measures for women**

All village committees affected by the Project should have female members, who enjoy the same participation rights as men at village meetings and congresses. Women's opinions will be collected and considered in surveys on LA and HD; women will enjoy the same rights in future LA and HD compensation. The jobs generated at the construction and operation stages will be first made available to women willing to take these jobs. Women will also be entitled to local employment training and recommendation.

The RAP prepared should include an entitlement matrix for the APs. See **Table 6** as an example.

Table 9 Entitlement Matrix

Type of impact	Degree of impact	APs	Compensation and resettlement policy	Compensation rate
Permanent LA	359.55 mu	203 households with 798 persons in Zhushuixi, Liusheng, Doingheqi, Sanchalu, Jiuqing, Dongchen, Lixin, Zhoujian, Dongmenwai, Nanchang, Nansha, Panjiaqiao, Baishi and, Luxialin Villages	1)Cash compensation; 2) Employment; 3)Skill training; 4)Social security	Cultivated land, construction land and garden land: 60,000 yuan/mu; woodland and unused land: 3,000 yuan/mu
Temporary land occupation	93.71m u	56 households with 216 persons in Luxialin, Zhushuixi, Liusheng, Doingheqi, Sanchalu, Jiuqing, Dongchen, Lixin and Zhoujian Villages	Cash compensation	Demolished ground attachments will be compensated for at replacement cost, or restored by the owner to the original standard, size and function under the construction budget.
Demolition of residential houses	22035 m ²	63 households with 222 persons in Lixin, Luxialin, Zhushuixi, and Baishi Villages	1)Cash compensation; 2)relocation; 3)property swap	As per Documents XCG [2014] No.96 and XCGO [2015] No.103
Demolition of non-residential properties	4838.38 m ²	15 households with 51 persons, and 6 enterprises with 45 persons in Luxialin, Zhushuixi and Dongmenwai Villages.	Cash compensation	As per Documents XCG [2014] No.96 and XCGO [2015] No.103

E. 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 land acquisition. If full compensation is not paid or necessary assistance measures are not available before land acquisition, a transition subsidy should be provided.

F. Financial Arrangements

The local county and district government should 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 land acquisition and house demolition 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. The RAP should describe by what means compensation fees are paid by the project to the affected villages or villagers. A rationale is that the

fund flow should be as direct as possible with minimum intermediate links.

G Public Participation and Information Disclosure

The project owner will implement the public engagement and consultation procedure in the project area. The specific measures proposed by the resettlement plan, including resettlement area, compensation policy, compensation standard, measures for restoring production and living standard, etc., will be widely recognized by the affected population before it is approved and implemented. The RAP will describe all measures taken or to be taken, involve the APs in the proposed resettlement arrangements, and foster the sense of participation in livelihood and living standard improvement or restoration activities. To ensure that the APs' opinions and suggestions are fully considered, public participation should be prior to project design and the implementation of resettlement relief measures. Public participation must run through the whole RAP planning, implementation and external monitoring process.

The affected population will participate in the whole process from the preparation to implementation of the resettlement plan. During the preparation of the RAP, the APs' expectations must be fully respected, and their needs and suggestions should be reflected to the design agency timely; the socioeconomic profile of the project area should be learned; the APs should be consulted on LA and HD compensation rates and resettlement policies; issues arising from resettlement should be solved in consultation with the APs. To achieve this purpose, a public meeting will be held before preparing the resettlement plan to inform the general public of this resettlement policy framework. The local government will help the affected households or non-residential units understand the compensation standards and their options specified in the resettlement plan.

At the RAP drafting and finalization stages, the PMO and owner should also disclose the RAP to the APs and the public at certain places of the project site and in certain languages. The first draft of the RAP should be disclosed at least three months prior to Bank evaluation. The final RAP must be disclosed again after acceptance by the Bank.

During project preparation, this RPF was disclosed on 26th November in the project area to collect comments from the APs.

Table 10 Public Participation Activities

Time	Venue	Participants	Mode	Key points	Key topics	Feedback
Jun. – Jul. 2014	Xiangshan, Ninghai, Fenghua	PMO, town governments, APs	Village congress, FGD	1. Disclosure of basic project information 2. Determination of resettlement impacts	Scope of construction, affected area, schedule	Project information was disclosed by means of Web, newspaper, broadcast, village meeting, etc.
Aug. 2015	Xiangshan, Ninghai, Fenghua	RAP preparation agency, PMO, village committees	FGD, socioeconomic survey, personal interview	Socioeconomic survey	/	/
Oct. – Nov. 2015	Xiangshan, Ninghai, Fenghua	PMO, local authorities, RAP preparation agency, town governments, village committees	Village congress	Discussion of resettlement programs	1. Learning policy basis, and compensation rates for LA and HD; 2. Covering endowment insurance for LEFs; 3. Assisting in	1. The municipal policies on LA and HD were distributed on site, and compensation rates introduced in detail; 2. The policy on endowment insurance for LEFs was introduced, and

					employment 4. Offering housing land, infrastructure and basic public services	eligibility defined; 3. Unskilled jobs generated by the Project should be first made available to the APs, and skills training provided to them; 4. The APs will be resettled in multiple modes, including cash compensation, property swap, etc.
Dec. 2015	Xiangshan, Ninghai, Fenghua	PMO, RAP preparation agency, town governments, village committees	FGD	Disclosure of grievance redress mechanism	1. Participating in all aspects of resettlement, and protecting the right of information and supervision power 2. Reflecting opinions and suggestions timely and effectively to protect lawful rights and interests	1. The APs are allowed to participate by various means. 2. The PMO introduced the grievance redress mechanism in detail, and disclosed the contact information of the agencies concerned.

H. Grievance Redress Procedure

Since the resettlement work is conducted with the participation of the APs, no substantial dispute will arise. However, in order to ensure that APs have a channel to file an appeal on any issue concerning land acquisition and resettlement, a grievance redress procedure must be established.

- **Stage 1:** If any AP is dissatisfied with resettlement or construction, he/she may file an appeal with the village committee orally or in writing, which should make a disposition 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 after receiving such disposition, which should 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 the PMO after receiving such disposition, which should make a disposition within two weeks.
- **Stage 4:** If the AP is still dissatisfied with the disposition of Stage 3, he/she may file an appeal with the Ningbo PMO after receiving such disposition, which should make a disposition within two weeks.
- **Stage 5:** If the AP is still dissatisfied with the disposition of Stage 4, he/she may file a suit in a civil court in accordance with the Civil Procedure Law after receiving such disposition.

In addition, the local villager autonomy pattern is also an effective way for dispute resettlement within communities. For example, the “three-in-one” villager autonomy pattern in Xiangshan County has proven effective, where prestigious villagers are elected as advocates of villager interests and wills, and democratic decision-making, management and supervision are practiced at the village level. First, matters for voting are collected by village officials and compiled into proposals through consultation; second, proposals are reviewed and revised by the village committee, and then distributed to villagers for comment; third, revised proposals are voted on by villager representatives.

This pattern ensures that matters to be voted on are based on adequate consultation, thereby giving full play to villager representatives and ensuring that decisions truly reflect public will.

I. Monitoring and Evaluation

Ningbo PMO and the component owners will supervise and monitor the implementation of the RAP. Supervision and monitoring results will be recorded in 6-monthly reports for submission to the Bank.

Internal monitoring and supervision:

- Check implementation, including checking the baseline information, valuation of asset losses, and the implementation of compensation, resettlement and restoration rights according to the RPF and the RAP.
- Monitor if the RAP is implemented as designed and approved.
- Check if the funds for RAP implementation are appropriated timely and fully, and if such funds are used in a manner consistent with the RAP.
- Record all appeals and their solutions, and ensure that appeals are handled timely.

Independent external monitoring: Xiangshan PMO and other participating counties will appoint an independent agency through public bidding to perform period external M&E on the implementation of the RAP. Such agency may be an academic or independent consulting firm, but must have qualified and experienced staff, and their terms of reference must be accepted by the Bank.

In adaptation to the internal supervision information and monitoring reports checked, the external M&E agency will perform a sampling survey (sampling rate: over 20%) after 6 months of implementation of the RAP. The main objectives are:

- To evaluate if the participation and compensation payment procedures, and restoration rights are implemented practically, and consistent with the RPF and the RAP;
- To evaluate if the RPF objective of improving or at least maintaining the living standard and income level of the APs has been realized;
- To gather qualitative socioeconomic impact indicators of project implementation; and
- To propose suggestions for improving the implementation procedure of the RAP in order to realize the principles and objectives of this RPF.