

Integrated Safeguards Data Sheet

Restructuring Stage

Restructuring Stage | Date ISDS Prepared/Updated: 28-September-2022 | Report No: ISDSR34300

Regional Vice President:	Manuela V. Ferro
Country Director:	Mara K. Warwick
Regional Director:	Benoit Bosquet
Practice Manager/Manager:	Ann Jeannette Glauber
Task Team Leader(s):	Qi Tian





I. BASIC INFORMATION

1. BASIC PROJECT DATA

Project ID P159870	Project Name Zhejiang Qiandao Lake and Xin'an River Basin Water Resources and Ecological Environment Protection Project
Task Team Leader(s) Qi Tian	Country China
Approval Date 06-Jun-2018	Environmental Category Partial Assessment (B)
Managing Unit SEAE1	

PROJECT FINANCING DATA (US\$, Millions)

SUMMARY

Total Project Cost	293.46
Total Financing	293.46
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Bank for Reconstruction and Development (IBRD)	150.00
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Non-World Bank Group Financing

Counterpart Funding	143.46
Local Govts. (Prov., District, City) of Borrowing Country	143.46

2. PROJECT INFORMATION



Current Program Development Objective

To strengthen integrated pollution and watershed management and increase access to improved water supply in selected landscapes in support of Zhejiang's program for the protection of Qiandao Lake and Xin'an River Basin.

3. PROJECT DESCRIPTION

A. Overview

1. The project is designed to demonstrate integrated watershed management practices, to improve water quality and ecosystem functions in catchments of Qiandao Lake and Xin'an River. The project activities aim at reducing major pollution loads by helping farmers reducing the use of fertilizer and pesticide, improving and extending the capacity of the wastewater treatment plant, strengthening flood and soil erosion control facilities, piloting wetland management, rehabilitating and replanting pest infested and fire damaged monoculture plantations and abandoned sites with mixed broadleaf species to enhance forest ecosystem resilience, providing piped water supplies to rural communities, and upgrading the system of water environment monitoring in the lake and its catchment. In cooperation with The Nature Conservancy (TNC), payment for environmental services (PES) is piloted within the project areas in parallel to the Project.

2. **Implementation Status and Achievement to Date.** The Implementation Progress and achievement of the Project Development Objectives performance ratings are both satisfactory since the project effectiveness in 2018. The Project complies with the legal covenants as well as Bank fiduciary and safeguards policies with no significant issues identified. The overall project risk in the Systematic Operations Risk-Rating Tool (SORT) remains as Moderate.

3. Over the past three years, significant progress has been achieved in reducing water pollution loads and restoring the Xin'an River and Qiandao Lake basin ecosystems, with the physical progress of most project activities having reached over 50 percent of the project end targets. Specifically, the integrated watershed management approach had been implemented through low-pollution farming, ecological friendly river restoration, rehabilitation of degraded forests, increased water supply services to rural communities and integrated basin water and environment quality monitoring systems development. Up to now, the total Bank loan disbursement reached to USD 74.20 million, which is around 49 percent of total loan of USD 150 million.

4. Given the solid achievements attained under the Project, the provincial government has proposed to enhance the development impacts on landscape and water resources management improvement through the optimization of project loan savings of around USD 28 million, which was mainly generated through competitive bidding processes of degraded forest restoration, river restoration and other infrastructure works since the Project implementation. It aims to scale up the innovative integrated watershed management approach and best practices achieved under the Project as designed at the Appraisal. Proposed enhancement activities (detailed in Section B) include: (a) expansion activity of rural water services for left behind alpine residents in Jiande County; (b) expanded rehabilitation of degraded monocultural forests (670 ha) to improve forest ecosystem resilience; (c) research on biological control of pine wood nematode endemic in Jiande and Chun'An respectively to promote the integrated pest management, and Quantification research of Green GEP in Jiande County; and (d) renovation of three field access bridges in selected water courses in village in Jiande County financed by counterpart funds.



B. Project Components

5. The Project encompasses the following three components and main activities. There is no change for the designed components under the restructuring but expanding certain activities (detailed in the according sub-component) under the overall project design framework and technical models using the loan saving.

Component 1: Landscape Management Improvement (Total Cost: USD106.66 million, of which IBRD USD86.02 million).

This component supports:

6. **Climate Smart Agriculture (CSA).** This sub-component finances activities including: (a) Soil nutrient management, supports the use of low impact measures to improve utilization efficiencies of fertilizers to reduce the pollutants discharge to watersheds; (b) Integrated pest management (IPM), supports upgrading of pest monitoring and early warning systems; promoting IPM practices for biological pest prevention and control ; and (c) Conservation agriculture practice, supports low impact pilots to demonstrate the use of low impact soil tillage and minimum tillage practices for the main crops in the catchments.

7. **Livestock Waste Management (LWM).** The sub-component supports incentive payment to participating farms for the improvement of LWM facilities for the safe collection and treatment of manure of existing small-scale pig and chicken farms with pollution discharge largely reduced.

8. **Forestry Ecosystem Protection.** This sub-component supports the improvement of ecological functions of plantations in the Qiandao lake catchment by rehabilitating and replanting pest infested and degraded monoculture plantation and small part of bare mountainous sites with diversified native species to form mixed forest structures.

A new scale up activity under this sub-component is for expanding rehabilitation of 670 ha degraded monocultural plantation forests in Jiande, a project county, adopting the forest management models developed under the Project.

9. To improve fire prevention and reduce erosion along existing roads, it supports the upgrade of 21 km forest road and fire protection access, as well as to improve forest fire monitoring and communication facilities. In addition, the project supports piloting small-scale wetland management in selected watersheds.

Component 2: Water Resources Management Improvement (Total Cost: USD160.09 million, of which IBRD USD54.36 million).

10. **Wastewater Management.** This sub-component finances the expansion of one existing domestic wastewater treatment plant (WWTP) in Rural Jiande using counterpart fund to increase its treatment capacity. To make full use of the WWTP's capacity, and to improve its operational efficiency, the combined sewer will be replaced by separated sewer systems, and the sewer network will be expanded to collect domestic wastewater from under-served areas.

11. **Water Course Improvement.** This subcomponent supports: (a) the improvement of water courses through the rehabilitation of 204 km river embankments, dredging of 50 km river channels, and the rehabilitation of 85 small overflow weirs in selected eight key watersheds as part of integrated pollution and erosion landscape management; and (b) the repair of 12 field access bridges across selected water courses in townships of Jiande. Under the restructuring, a scale up activity for the renovations of three additional field access bridges are proposed to conduct financed by the counterpart funds for the improvement of local community livelihoods.



12. **Potable Water Supplies in Rural Areas.** The subproject finances the construction and upgrade of drinking water treatment plants and the associated piped network to provide potable piped water to rural inhabitants in townships in the project area.

An expansion of rural water services in Jiande County under the restructuring will support the development of a GIS system for integrated rural and urban water supply management, upgrade of four rural water networks and a water pump station, as well as construction of some pipeline network.

Component 3: Institutional Capacity Building, Monitoring and Project Management (Total Cost: USD10.19 million, of which IBRD USD9.25 million). Key activities include the following:

13. **Technical assistance and training.** It includes: (a) institutional strengthening and capacity building of provincial project management office (PPMO) and project county PMOs, as well as project implementation units (PIUs) and farmers by providing technical assistance and training to the relevant staff and farmers on implementing technical design, adopting new technologies and effective project management; (b) finance consulting services, set up a technical expert team to provide technical support to the CPMOs and PIUs; and (c) finance workshops, seminars and dissemination of lessons learnt and best practices under the Project.

14. **Promote Inter-Provincial Collaboration.** Given the inter-provincial nature of the causes of water pollution in Qiandao lake and the Xin'an river, the project will promote inter provincial collaboration between the Anhui and Zhejiang provinces, through organizing training and workshops in knowledge sharing on effective integrated watershed management in particular in the dissemination of the lessons learned from the project to broad river basin management.

15. **Study and Research programs.** These include research activities on forest rehabilitation and management, Climate Smart Agricultural, integrated watershed/landscape management, and sustainable financing. The restructuring will support further research on (a) Biological control of pine wood nematode endemic in Qiandao Lake and Xin'an River Basin (in Jiande and Chun'An project county); and (b) Research and quantification of Gross Ecosystem Product (GEP) in Jiande county.

16. **Monitoring and Evaluation.** The project finances (a) monitoring and evaluation of the project implementation progress; and (b) support strengthening the Qiandao Lake water and catchment-wide monitoring system.

4. PROJECT LOCATION AND SALIENT PHYSICAL CHARACTERISTICS RELEVANT TO THE SAFEGUARD ANALYSIS (IF KNOWN)

Located in the two project counties, Chunan and Jiande in Zhejiang Province, Qiandao Lake is the largest freshwater artificial lake in Yangtze River Delta. The Lake came into being with the construction of Xin'anjiang Reservoir, which covers a total water surface of 573 km² and 1,078 islands. It is the important sources of drinking water, hydroelectricity and tourism for local economy. The lake and river's catchments are located in part areas of Anhui and Zhejiang provinces, mainly consisting of land use for forestry, agriculture and rural and urban settlement. Based on the national government approved "Integrated Plan for Water Resources and Eco-Environmental Protection in the Basin of Qiandao Lake and its Upstream Xin'an River", the project is designed to demonstrate an integrated landscape management practice in the selected small watersheds within two counties of Zhejiang Province. The project area features warm and humid



subtropical monsoon climate, sufficient sunshine and rainfall, developed water and farming system; and forest plays an important role to its ecological environment protection such as water retaining and erosion reduction. The project area is mainly in eight selected tributaries among total more than 100 tributaries flowing to the Qiandao Lake and Xin'an River, as well as in an afforested areas in lake shoreside area for forest ecosystem protection in two project counties. Majority of the people (80%) who live in the catchment areas are rural dwellers.

5. ENVIRONMENTAL AND SOCIAL SAFEGUARDS SPECIALISTS ON THE TEAM

Zhefu Liu, Social Specialist
Yiren Feng, Environmental Specialist

6. SAFEGUARD POLICIES TRIGGERED

Safeguard Policies	Triggered	Explanation
Environmental Assessment (OP) (BP 4.01)	Yes	<p>The project is classified as a Category B project per OP4.01. By demonstrating the integrated landscape management approach in the watershed, the project is designed as environmentally friendly investments in Chun'an County and Jiande County in Zhejiang Province and aims at reducing pollutants entering Qiandao Lake and Xin'an River, and improving local ecological environment. The project triggers OP 4.01 Environmental Assessment to ensure that it is environmental sound.</p> <p>An EIA and stand-alone ESMP has been prepared for the Project. The ESMP includes two Pest Management Plans (PMPs, respectively for agriculture and forestry activities), the Environmental Code of Practices (ECOPs) for roads, small-scale civil works and river works, and the Environmental Protection Guidelines for Plantations (EPGP). It also includes site-specific measures for sensitive receptors. Additionally, key findings of a separate Social Assessment (SA) were integrated into the EIA and ESMP. Extensive public consultation and information disclosure has been conducted in the selected watersheds.</p> <p>The proposed project restructuring for some scaling up activities using loan savings are within the original project design framework. No new</p>



safeguards policy will be triggered and the project EA category remains as B. A supplementary Environmental Impact Assessment (EIA/ESMP) has been prepared for the proposed activities under the restructuring.

To avoid and minimize general adverse environmental impacts during construction, the ECOPs for road and small scale civil works will be continuously used by the new added activities, as referred in the ESMP and will be included into relevant bidding documents and contracts during project implementation. For the environmentally sensitive sites, the impacts have been assessed in the EIA with site-specific mitigation measures proposed and summarized in the ESMP.

Performance Standards for Private Sector Activities OP/BP 4.03 No

This policy is not triggered.

Natural Habitats (OP) (BP 4.04) Yes

Under the Project, Bank-financed investments support the ecological protection and conservation of selected rivers and forests in the basin, thus the policy is triggered. It is not expected that the project would potentially cause significant conversion or degradation of natural habitats. Instead, the project is anticipated with significant ecological benefits through pollution control and ecological improvement of the Qiandao Lake and its tributaries. For the limited ecological impacts expected during project implementation, adequate mitigation measures have been developed in the EIA and ESMP to ensure compliance.

Some savings will finance expansion of rehabilitation and restoration of selected degraded plantation forest (670ha) in Jiande County, which will be implemented based on the set technical models. The EA confirmed that no critical natural habitat was involved, and it is not expected that the project would have the potential to cause significant conversion or degradation of natural habitats. Instead, the project will support ecological improvement, enhance biodiversity and reduce soil erosion in the selected forest areas.

Forests (OP) (BP 4.36) Yes

This policy is triggered given the rehabilitation of degraded forests and enrichment planting of conifer forests would have significant positive



impacts on the health and quality of the forests. Parts of activities would be undertaken in ecological protection forest sites and the proposed project activities will not affect the rights and welfare of local communities and their level of dependence upon forests. The impacts of the forest restoration and rehabilitation have been assessed during the EIA process. A separate Environmental Protection Guidelines for Plantation (EPGP) has been developed as part of the project ESMP to further enhance the ecological and environmental benefits of the project, as well as to avoid any potential negative impacts.

The new added activity for expansion of forest rehabilitation and restoration in Jiande County will continue to apply the EPGP, as referred to in the ESMP.

Pest Management (OP 4.09)

Yes

The activities for agricultural non-point source pollution control and forest restoration and rehabilitation involve reduction of use of pesticides, which triggered the OP 4.09 . Two separate PMPs (respectively for agriculture and forestry activities) have been prepared in accordance with the Bank’s safeguard policy on how to promote a safe, effective and environmentally sound pest management approach.

The new added activity for expansion of forest rehabilitation and restoration in Jiande County will continue to apply the PMP for the forest plantation activities, as referred in the ESMP.

Physical Cultural Resources (OP) (BP 4.11) Yes

At appraisal, the EA and the RAP survey confirmed that the project will not affect any PCR except the relocation of 13 rural households’ graves, which is viewed connecting to local tradition. All the compensation and relocation measures for those graves have been formally planned and developed in the RAP based on detailed survey and extensive consultation among the owners, which has been implemented according to the RAP during the implementation.

New added activities will not trigger this policy as screened by the EA and RAP.



Indigenous Peoples (OP) (BP 4.10)	No	<p>A social assessment was undertaken by the task team and external consulting team. The assessment findings confirmed that there is no ethnic minority community in the project areas. IP policy is not triggered.</p>
Involuntary Resettlement (OP) (BP 4.12)	Yes	<p>At the project mid-term review, further consultation was made on the proposed restructuring activity and concluded that no ethnic minority community identified in the proposed project areas. The OP 4.10 is not triggered.</p> <p>The project will permanently and temporarily require some collective lands for construction/upgrade of project civil works. Therefore OP 4.12 was triggered and a resettlement action plan has prepared to mitigate negative impacts on the resettlement. In case the project design would be adjusted at the project implementation or new project components/activities will be added into at the project restructuring, a resettlement policy framework (RPF) was prepared to guide any resettlement works at the project implementation or restructuring.</p> <p>Guided by the RPF, a supplementary RAP was prepared, which identified that temporarily a small amount of collectively hilly land (4.4 ha) would be required for pipeline installation, and proposed mitigation measures for the new activity of expansion of rural water supply service in Jiande project County.</p>
Safety of Dams (OP) (BP 4.37)	Yes	<p>The project will not finance construction or rehabilitation of any dams as defined under this policy. However, the policy is triggered because the insufficient dam management and maintenance in the river/lake basin might threaten the Bank investments. Per this policy, the dam safety assessment has been conducted for fifty-seven project-linked dams in the relevant watersheds to avoid any potential negative impacts from improper dam management at the project preparation stage. A detailed Dam Safety Action</p>



Plan has been accordingly prepared and integrated in the EIA and ESMP for guiding the project implementation.

In addition, per the policy of OP4.37, dam safety assessments have been conducted for seven project-linked dams in the project areas for the newly added activities in Jiande County to avoid any potential negative impacts from potential improper dam management. A detailed action plan has been therefore developed for implementation.

Projects on International Waterways (OP) (BP 7.50)	No	This policy is not triggered as the project does not involve trans-boundary rivers.
Projects in Disputed Areas (OP) (BP 7.60)	No	This policy is not triggered as the project does not involve any disputed areas.

II. KEY SAFEGUARD POLICY ISSUES AND THEIR MANAGEMENT

A. SUMMARY OF KEY SAFEGUARD ISSUES

1. Describe any safeguard issues and impacts associated with the Restructured project. Identify and describe any potential large scale, significant and/or irreversible impacts.

Environment:

The Restructured project remains to be classified as Category B. The EA and SA have not identified any potential large-scale, significant and/or irreversible environmental and social impacts. The project by design is a set of mitigation measures to address the existing environmental problems in the Qiandao Lake/Xin'an River basin area, and will bring about overall environmental and social benefits, such as reducing land and water pollution, decreasing soil erosion, enhancing forest resilience and improving local livelihoods through environment friendly investments in Chun'an and Jiande County in Zhejiang Province. The newly expanded activities under the restructuring are within the project scope and design. Small-scale and dispersed construction activities under the project trigger six environmental safeguards policies.

Environmental Assessment (OP4.01): Environmental Assessment (EA) was conducted for the Project including sub-activities funded by counterpart resources in accordance with the World Bank safeguards policies and applicable Chinese laws and regulations. Anticipated adverse impacts resulting from proposed project activities mainly include: (a) general construction nuisance caused by construction activities (e.g. dust, noise, wastewater, solid waste, soil erosion and traffic disturbance); (b) Sediment dredging impacts (e.g., temporary disturbance to water quality) for the selected secondary or even smaller tributaries of Qiandao Lake/Xin'an River, and the disposal of sediment (approximately 109,700m³ in total, classified as Grade I/II soil quality according to the sediment monitoring results); and (c) the operation of Shouchang WWTP, waste management system for livestock & poultry farms (odor and end products) and small constructed wetland (water quality and waste management). The project has integrated the preventive and mitigation measures into the project design, construction and operation in the EIA and ESMP to minimize the anticipated adverse impacts to an acceptable level or eliminated entirely, as detailed in section A.4.



Natural Habitats (OP4.04): The project finances the ecological protection and conservation of selected rivers and forests in the selected watersheds; thus, the policy is triggered. The EA confirmed that no critical natural habitat was involved, and it is not expected that the project would have the potential to cause significant conversion or degradation of natural habitats. Instead, the project would reduce the discharge of pollutants into the lake/river and support the ecological improvement in the selected areas.

Forests (OP4.36): The rehabilitation of degraded forests and enrichment planting amounting to 11,140 ha in two project counties will have significant positive impacts to the health and quality of the forests. Parts of activities would be undertaken in ecological protection forest sites but will not affect the rights and welfare of local communities and their level of dependence upon forests. Relevant negative environmental impacts are anticipated to be limited to site preparation and forest tending practice, which are site-specific and temporary, and the mitigation measures have been incorporated to the project design.

Pest Management (OP4.09): The proposed agricultural non-point source pollution control and forest restoration and rehabilitation activities involve the use of pesticides, therefore, the OP 4.09 is triggered.

Physical Cultural Resources (OP4.12): Thirteen rural households' graves in the project-affected areas need to be relocated with the project implementation, which is viewed as connecting to local tradition and thus triggered this policy.

Safety of Dams (OP4.37): The project will not finance construction or rehabilitation of any dam. However, the policy is triggered considering that insufficient dam management and maintenance if any in the relevant river/lake watersheds might threaten the Bank investments. Fifty-seven dams were identified as linked to the project and assessed per the policy's requirements.

Environmental Impacts from the proposed Project Restructuring

The supplementary Environmental Impact Assessment (EIA/ESMP) has been prepared for the proposed activities under the restructuring and confirmed that (a) the project EA category remains as B, given the type, location, sensitivity, scale, nature and magnitude of potential adverse impacts and risks; and (b) no new safeguards policy will be triggered.

Within the original Project scope and context with much smaller and simpler investments, anticipated adverse impacts resulting from the proposed new activities mainly include the general construction nuisance caused by small scale construction activities (e.g., dust, noise, wastewater, solid waste, soil erosion and traffic disturbance). The main environmental issue during the operation phase is the noise impact of the pumping stations. These potential negative impacts of the newly proposed activities will be short-term, limited, temporary and site specific and can be mitigated given its linear project feature. Proper implementation of the preventive and mitigations measures, which has integrated the into the project design, construction, and operation in the EIA and ESMP (including the ECOPs for road and small-scale civil works, PMPs and EPGP for the forest plantation activities and Dam safety action plan) will help to avoid, reduce, mitigate, or minimize the anticipated adverse impacts to an acceptable level. For the environmentally sensitive sites, the impacts have been assessed in the EIA with site-specific mitigation measures proposed and summarized in the ESMP.

Natural Habitats (OP4.04): same to the approved Project, the new added activity will finance the expansion of rehabilitation and restoration of selected degraded forest areas (670ha), thus the policy is triggered. The EA confirmed



that no critical natural habitat was involved, and it is not expected that the project would have the potential to cause significant conversion or degradation of natural habitats. Instead, the project will support ecological improvement, enhance biodiversity, and reduce soil erosion in the selected forest areas.

Forests (OP4.36): same to the approved project, the rehabilitation of degraded forests and enrichment planting in Jiande County will have significant positive impacts to the health and quality of the forests. The new proposed activity will not affect the rights and welfare of local communities and their level of dependence upon forest. Relevant negative environmental impacts are anticipated to be limited to site preparation and forest tending practice, which are site-specific and temporary, and the mitigation measures have been incorporated to the project design and Environmental Protection Guidelines for Plantation (EPGP).

Pest Management (OP4.09): same to the approved project, the proposed expansion of forest restoration and rehabilitation activities in Jiande County will adopt the integrated pest management (IPM) approach to address the pest related issues, therefore, the OP 4.09 is triggered. The PMP will be continuously applied for the new added forest plantation activities.

Safety of Dams (OP4.37): The project will not finance construction or rehabilitation of any dam as defined under this policy. For the new added activities using loan saving in Jiande County, seven small dams are identified as linked to the new proposed activity. The OP 4.37 is triggered for the new activity, which were assessed per the policy requirements to avoid any potential negative impacts from potential improper dam management. A detailed action plan has been developed for implementation.

Social:

The project will permanently and temporarily require some collective lands for construction/upgrade of project civil works. Therefore OP 4.12 was triggered and a resettlement action plan has been prepared to mitigate negative impacts on the resettlement. The project will likely result in acquisition of 15.9 hectares collective lands at 22 villages, including 2.6 hectares of collective land in Chunam county and 13.3 hectares of collective land in Jiande County, as well as 199.9 hectares of collective land leasing for project construction, specific for pipeline installations. About 134 rural families with 468 persons will be affected by the permanent land acquisition and 3,313 rural households with 11,966 persons by the temporary acquisition. The impact of land acquisition is minor and avoiding housing demolition and minimizing land acquisition are the elementary principle and requirement at the project preparation to reduce the impacts to the resettlement.

Consultation with the project counties and the Provincial Minority Department concluded that there are no minority villages/communities in or collectively attached to project areas.

Further, a due diligence review has been conducted on the resettlement impacts and identified two local funded projects within nine and two years prior to the project identification as linkage projects. Land acquisitions were carried out based on Chinese Land law and Zhejiang Provincial Land Regulation and there were no resettlement legacy issues identified. The objective of the resettlement and the resettlement policies confirmed their substantial compliance with the RAP inclusive of Bank requirements.

In case the project design would be adjusted at the project implementation or new project components/activities will be added into the project restructuring, a resettlement policy framework (RPF) was prepared to guide any resettlement activities during the project implementation or restructuring.



Social Impacts from the Proposed Project Restructuring

The proposed project restructuring is within the project design framework. For the proposed scale up activities in Jiande under the restructuring, a supplementary RAP has been prepared, adopting the same approach as the original RAP approved by the Bank in strategies, compensation package, institutional arrangements, etc. Accounted by the RAP, 4.4 hectares of collective hilly land will be temporarily occupied for water supply pipeline installation. The temporary land uses will affect 251 rural families with 965 persons.

Due diligence reviews for linked activities including construction/upgrading of four pumping stations and two elevated water tanks under a government program were also conducted on the resettlement impacts, which found that 4.8 hectares of collectively agricultural land and 51 rural families with 227 persons will be affected by permanent land acquisition. A RAP for linked activities was prepared, guided by the Resettlement Policy Framework (RPF). These RAPs were conducted with the consultation and participation processes as well as GRM.

2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area.

Based on the nationally approved “Integrated Plan for Water Resources and Eco-Environmental Protection in the Basin of Qiandao lake and the Upstream Xin’an River”, the project is designed to demonstrate an integrated landscape management practice in the Qiandao Lake/Xin’an River basin area, which will be likely replicated in the future. It will bring about overall environmental and social benefits, contribute to sustainable development of the project counties, and benefit local people by improving their living environment.

The environmental and social assessments for the newly added activities showed that they will have positive environmental and social impacts with the improvement of potable water services in rural areas in Jiande County and forest resilient enhancement.

3. Describe any potential alternatives (if relevant) considered to help avoid or minimize adverse impacts.

During the preparation of the Project at appraisal and for the activities under this restructuring, the EA team has worked closely with the implementing agency, the FSR team and the RAP/SA team to conduct comprehensive alternative analyses, taking into account technical, economic, financial, environmental and social considerations. It included the analyses of with/without project scenario. Various options were compared for pipeline route, and the siting of the pumping stations, etc. As results, the optimal alternatives were selected.

4. Describe measures taken by the borrower to address safeguard policy issues. Provide an assessment of borrower capacity to plan and implement the measures described.

Environment:

During project preparation, the environmental and social impacts of the proposed project have been thoroughly assessed with appropriate mitigation measures developed in a stand-alone ESMP. The ESMP specifies detailed mitigation measures to avoid, minimize or mitigate the project-related impacts, including:



- (a) To avoid and minimize the general adverse environmental impacts during construction, three Environmental Code of Practices (ECOPs), respectively for small-scale civil works, river rehabilitation works and roads, have been developed as part of the ESMP to be included into relevant bidding documents and contracts during project implementation.
- (b) The sediment dredging, and disposal of dredged materials have been designed in an environmentally sound manner, including the selection of dredging method and dredging timing and the management of sediment storage sites and dewatering effluent.
- (c) Sufficient mitigation measures specific to the operation of Shouchang WWTP, waste management system for livestock & poultry farms and constructed wetland have been integrated into the ESMP to make sure the subprojects are environmentally sustainable. In addition, due diligence has been conducted as part of the EA and confirmed the environmental compliance and following-up action plans of the linked facilities.
- (d) A separate Environmental Protection Guidelines for Plantation (EPGP) was developed as part of the project ESMP to further enhance the ecological and environmental benefits of the forest plantation/rehabilitation subproject, as well as to avoid any potential negative impacts.
- (e) The PMPs have been prepared in accordance with the Bank's safeguard policy on how to promote a safe, effective and environmentally sound pest management approach. Considering the features of different subprojects, two separate PMPs, respectively for agricultural and forest plantation activities, were developed to better suit the project activities.
- (f) For the relocation of thirteen graves in rural areas, all the compensation and relocation measures have been formally planned and integrated in the RAP based on detailed survey and extensive consultation among the owners. During the relocation process, special attention will be paid to respect the local customs.
- (g) Per the policy of OP4.37, the dam safety assessment has been conducted for fifty-seven project-linked dams in the watersheds to avoid any potential negative impacts from improper dam management, and a detailed action plan has been therefore developed for implementation.

Measures for the Environmental Impacts of the Restructuring

In accordance with the Bank and national government regulations, an EIA/ESMP was prepared for the newly proposed activities. The proposed project adjustments are being undertaken within the project design framework. No significant environment issues are identified. The potential impacts during the operation phase of the small water supply plants and pumping stations have been assessed, with appropriate mitigation measures summarized in the ESMP, including noise, wastewater, solid waste, EHS issues, drinking water sources protection etc. To enhance the environmental benefits of the new activities, the Project has mainstreamed the mitigation measures into the project design, construction and operational phases respectively. The ECOPs for road and small-scale civil works will be continuously used by the new added activities, as referred in the ESMP and will be included into relevant bidding documents and contracts during project implementation. The EPGP and PMP will continuously apply for the expansion of rehabilitation of plantation forest as referred to in the ESMP. The dam safety assessment has been conducted for seven project-linked dams in the project areas of newly added activities in Jiande County to avoid any potential negative impacts from potential improper dam management. A detailed action plan has been therefore developed for implementation.



OP 4.12 Involuntary Resettlement. Project social assessments were conducted in the project areas. Experienced sociologist consultants were contracted to lead the SA exercise, incorporation with the project staff and the local authorities. Through extensive consultation with project stakeholders in particular the farmers living in the project areas, the project SA report was prepared to inform the project design on the critical social factors that would affect or be affected by the project, and recommend appropriate measures to minimize potential social risks, as well as actions that should be taken to mitigate the identified risks during the project implementation. The results of the SA have been and will further be incorporated into project design.

The Resettlement Plan (RP) was prepared based on information disclosure policy, participation of the affected villagers, in line with the World Bank OP 4.12, involuntary Resettlement and domestic laws and regulations. It provides details on resettlement implementation procedures and requirements to be followed during project implementation, including compensation rates, mitigation measures, institutional and monitoring arrangements, grievance redress mechanism etc. Internal and external resettlement monitoring arrangements were developed and included in the RP.

A grievance redress mechanism was designed as part of the RP, including the process and grievance record table, in which grievances can be filed both orally and or in writing. The project authority set up four levels of GRM to deal with people's concerns, such as: the independent resettlement monitoring specialist, project assigned staff in cities, government departments in cities, provincial project authority and legal court if cases were not satisfied. This mechanism has been disclosed to the local population.

The SA and RP were prepared by the Zhejiang PPMO, reviewed by the Bank and were found compliant with the Bank requirements. The documents were disclosed locally and on the Bank websites.

Measures for social Impacts from the proposed restructuring

Social assessments were undertaken to identify the resettlement impacts and the RAP was updated to mitigate the resettlement impacts on temporary land uses. In addition, a resettlement action plan was also prepared to guide land acquisition in the identified linkage project supported by local government funding. These two RAPs were guided by the RPF agreed by both the Bank and the engaged two cities.

Borrower capacity

The arrangements for project preparation and implementation have been made at both provincial and local levels. The Provincial Project Management Office (PPMO) has been established within Zhejiang Provincial Construction Department through strengthening the existing PPMO of Bank financed Qiantang River Basin Small Town Environment Project, which has demonstrated strong capacity and good track records in the management of several Bank-financed projects over past two decades. The PMO's capacity of ensuring safeguards compliance during project preparation and implementation is justified as adequate. At local level, the PMOs have been established in Chun'an County and Jiande County within the relevant Development and Reform Commissions respectively, to be responsible for the project preparation and implementation. Capacity building for the city/county level PMOs will be part of the project training and technical assistant programs.

The ESMP implementation of the project is concluded satisfactory in the regular supervision missions and confirmed by the external environmental monitoring agency. The environmental management system was well established. Environmental management training was organized for the contractors regularly, the environmental monitoring was



conducted regularly by an external professional monitoring agency in line with the ESMP requirements. The generic mitigation measures and site-specific mitigation measures were taken adequate and timely by the contractors, the OHS measures, traffic safety and construction safety were well managed on the construction sites. The latest Bank requirements of the ESF/Safeguard interim note: COVID-19 considerations in construction/civil works projects have also been included in the EIA/ESMP. The external monitoring also confirmed that no severe or serious incidents occurred since the implementation of the project.

The project RP implementation is found satisfactory and in line with the pertinent government regulations during the latest missions and by the external monitor. All resettlement activities were completed successfully in consistent with the RAP, national land law and Zhejiang provincial land regulation. Prior to the project mid-term review, the project required 8.4 hectares of collective land, including 6.6 hectares in ChunAn county and 1.8 ha in Jiande County. The resettlement implementation is transparent and compliant with the RP, which is regularly monitored by the external monitor and supervised by the Bank. Extensive consultations were carried out in the processes of investigation, compensation, and restoration.

5. Identify the key stakeholders and describe the mechanism for consultation and disclosure on safeguard policies, with an emphasis on potentially affected people.

Key project stakeholders identified by the environmental and social assessments are local governments, individual rural residents (households), village groups and communities in the project areas, as well as the PIUs.

During the preparation of EIA/ESMP, key stakeholders have been identified to ensure the implementation of well-targeted and meaningful public consultation for the project. Two rounds of public consultation were conducted with the participation of the public and identified key stakeholders. The first round took place during January-July 2017. The second round was carried out after the draft EA report was completed during August-November 2017. The project information was disclosed at project-affected communities and government websites before each round of consultation. The EA and ESMP incorporated countermeasures to address the concerns of consulted people. In addition, the grievance redress mechanism has also been proposed as part of the project ESMP for continuous public consultation during project implementation. The EIA and ESMP were disclosed locally and in the Bank info-shop on Dec 8, 2017.

For the social aspect, during the project preparation, public consultations were conducted in various forms with all relevant stakeholders. The preference, concerns and recommendations from the involved stockholders have been taken consideration in project design and operational arrangements. The Hehai University, which was contracted by PMOs to conduct the census and social survey, the social impact analysis and public consultation during the project preparation, made significant contributions to the preparation of the RAPs and for the farmers' broad participation. A resettlement management system with proper staff and resources in the PPMO and in project counties are established according to the RP to internally monitor the resettlement process and report semiannually to the Bank. Dedicated staff were appointed in the PPMO and each county PMO to be responsible for the resettlement related assignment. In addition, an experienced external resettlement monitor has been contracted and engaged according to the RP to ensure regular monitoring and reporting. The training program in the RP has been conducted to ensure capacity building. The social safeguard documents have been disclosed locally and in the Bank Info-shop on Dec. 16, 2017.



For the project restructuring, key stakeholders have been identified to ensure the implementation of well-targeted and meaningful public consultation for the project during the preparation of new added activities' EIA/ESMP and RAP. Key stakeholders identified include project affected groups, relevant government agencies and related public utilities corporates. The public consultation was conducted through expert consultations, questionnaires, symposia, and interviews. Two rounds of public consultation were conducted with the participation of the public and identified key stakeholders. The primary objective of the first round was to survey the public's opinion about the project, while the second round communicated the EA findings, discussed intended mitigation measures, and confirmed public acceptance and satisfaction. The first round took place from January 5 to February 26, 2022. The second round was carried out after the draft EA report was completed during Mar 10 to July 5, 2022. The EIA/ESMP incorporated countermeasures in the project design, construction and operation phase to address the concerns of consulted stakeholders. The project information was disclosed at project-affected communities and government websites before each round of consultation. In addition, the grievance redress mechanism has also been proposed as part of the project ESMP for continuous public consultation during project implementation. The supplementary EIA/ESMP was disclosed locally and at the Bank website on July 19 and July 26 2022 respectively. The supplementary RAP was disclosed on the government website and the Bank website on July 15, 2022 and July 26, 2022, respectively.

B. DISCLOSURE REQUIREMENTS

Environmental Assessment/Audit/Management Plan/Other

Date of receipt by the Bank	Date of submission for disclosure
25-Jul-2022	26-Jul-2022
For Category 'A' projects, date of distributing the Executive Summary of the EA to the Executive Directors	
"In country" Disclosure	
Country	Date of Disclosure
China	19-Jul-2022

Comments

Resettlement Action Plan/Framework Policy Process

Date of receipt by the Bank	Date of submission for disclosure
25-Jul-2022	26-Jul-2022



“In country” Disclosure

Country	Date of Disclosure
China	15-Jul-2022

Comments

Pest Management Plan

Was the document disclosed prior to appraisal?

Yes

Date of receipt by the Bank	Date of submission for disclosure
05-Feb-2018	06-Feb-2018

“In country” Disclosure

Country	Date of Disclosure
China	06-Feb-2018

Comments

C. COMPLIANCE MONITORING INDICATORS AT THE CORPORATE LEVEL

OP/BP/GP 4.01 - Environment Assessment

Does the project require a stand-alone EA (including EMP) report?	Yes
If yes, then did the Regional Environment Unit or Practice Manager (PM) review and approve the EA report?	Yes
Are the cost and the accountabilities for the EMP incorporated in the credit/loan?	Yes

OP/BP 4.04 - Natural Habitats

Would the project result in any significant conversion or degradation of critical natural habitats?	No
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If the project would result in significant conversion or degradation of other (non-critical) natural habitats, does the project include mitigation measures acceptable to the Bank?	NA
OP 4.09 - Pest Management	
Does the EA adequately address the pest management issues?	Yes
Is a separate PMP required?	Yes
If yes, has the PMP been reviewed and approved by a safeguards specialist or PM? Are PMP requirements included in project design? If yes, does the project team include a Pest Management Specialist?	Yes
OP/BP 4.11 - Physical Cultural Resources	
Does the EA include adequate measures related to cultural property?	Yes
Does the credit/loan incorporate mechanisms to mitigate the potential adverse impacts on cultural property?	Yes
OP/BP 4.12 - Involuntary Resettlement	
Has a resettlement plan/abbreviated plan/policy framework/process framework (as appropriate) been prepared?	Yes
If yes, then did the Regional unit responsible for safeguards or Practice Manager review the plan?	Yes
OP/BP 4.36 - Forests	
Has the sector-wide analysis of policy and institutional issues and constraints been carried out?	NA
Does the project design include satisfactory measures to overcome these constraints?	NA
Does the project finance commercial harvesting, and if so, does it include provisions for certification system?	No
OP/BP 4.37 - Safety of Dams	



Have dam safety plans been prepared?	Yes
Have the TORs as well as composition for the independent Panel of Experts (POE) been reviewed and approved by the Bank?	NA
Has an Emergency Preparedness Plan (EPP) been prepared and arrangements been made for public awareness and training?	NA

The World Bank Policy on Disclosure of Information

Have relevant safeguard policies documents been sent to the World Bank for disclosure?	Yes
Have relevant documents been disclosed in-country in a public place in a form and language that are understandable and accessible to project-affected groups and local NGOs?	Yes

All Safeguard Policies

Have satisfactory calendar, budget and clear institutional responsibilities been prepared for the implementation of measures related to safeguard policies?	Yes
Have costs related to safeguard policy measures been included in the project cost?	Yes
Does the Monitoring and Evaluation system of the project include the monitoring of safeguard impacts and measures related to safeguard policies?	Yes
Have satisfactory implementation arrangements been agreed with the borrower and the same been adequately reflected in the project legal documents?	Yes

III. APPROVALS

Task Team Leader(s)	Qi Tian	
Approved By		
Safeguards Advisor	Nina Chee	28-Sep-2022
Practice Manager/Manager	Ann Jeannette Glauber	29-Sep-2022



The World Bank

Zhejiang Qiandao Lake and Xin'an River Basin Water Resources and Ecological Environment Protection Project
(P159870)

RESTRUCTURING ISDS