

World Bank financed-Zhejiang Qiandao Lake  
and Xin'an River Basin Water Resources and  
Ecological Environment Protection Project

# **RESETTLEMENT ACTION PLAN**

OF

World Bank-financed Zhejiang Qiandao Lake and  
Xin'an River Basin Water Resources and Ecological  
Environment Protection Project ( Jiande and Chun'an )

Chun'an and Jiande Project Management Office

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## **Definition**

This Resettlement Action Plan (RAP) is prepared according to the Laws and Regulations of PRC, and Zhejiang Province as well as the Guidelines of the World Bank (Operational Directive for Involuntary Resettlement OP 4.12). The purpose of this document is to set out an Action plan for the Resettlement and Rehabilitation of the Displaced persons (DPs) to ensure that they will benefit from the project and their standards of living will improve or at least be restored after the project impact.

Acquisition of land and other assets for the project will adversely affect the livelihood of persons who live, work or earn their living on the land that will be acquired for the project. DPs are defined as those persons whose income or livelihoods will be adversely affected by land acquisition for the project.

**Displaced persons(DPs)** include the following categories:

- 1) Persons who have a title, right, interest, in structures (houses, enterprises, shelters, or public buildings), land (including residential, agricultural, and grazing land) or any other asset acquired or possessed, in full or in part, permanently or temporarily;
- 2) Persons who use the structures, land or assets described above; or persons whose business, occupation, work, place of residence or habitat adversely affected; or
- 3) Persons whose standard of living is adversely affected as a consequence of land acquisition.

## **Affected Persons**

“Affected Persons” means persons who on account of the execution of the project had or would have their: a) standard of living adversely affected; or b) right, title or interest in any house, land (including premises, agricultural and grazing land) or any other fixed or movable asset acquired or possessed, temporarily or permanently; or c) business, occupation, work or place of residence or habitat adversely affected.

DPs may be individuals or legal persons such as a company, a public institution. Definition of DPs is not to set a limit to their legal registration or permission to live or conduct business in the affected location, or to the compensation of their property. Thus, it includes:

- 1) All those affected by the project regardless of their legal rights or absence thereof to the assets being taken; and
- 2) Persons without residential permit to live in a certain area.

Therefore all such persons who are affected will be considered and recorded as DPs, regardless of their legal connection to assets land or location.

If there are more than one person, family or household using or holding a title to the same land or property that is acquired, they will be compensated and rehabilitated according to the loss they suffer, their rights, and the impact on their living standards. The definition of DPs is linked directly to the adverse effect of the project, regardless of legal rights title or interest.

All DPs are entitled to the improvement or at least restoration of their standards of living, and compensation for the material losses they suffer. Compensation for assets will cover replacement cost. No deductions or discounts will be applied to the compensation amount for depreciation or other reasons. All DPs deriving an economic benefit from the affected land and property are entitled to receive rehabilitation benefits in addition to the compensation for their assets lost. Those DPs without title, authorization or legal permission to reside, conduct business, cultivate land or construct structures are eligible for rehabilitation of their livelihoods and compensation for their assets on an equal footing with those with formal legal title, authorization or permissions to the assets.

**Criteria for Eligibility.** Displaced persons may be classified in one of the following three groups:

- (a) those who have formal legal rights to land (including customary and traditional rights recognized under the laws of the country);
- (b) those who do not have formal legal rights to land at the time the census begins but have a claim to such land or assets—provided that such claims are recognized under the laws of the country or become recognized through a process identified in the RAP; and
- (c) those who have no recognizable legal right or claim to the land they are occupying.

**Resettlement:** refers to make an arrangement to people’s production and living that are affected in order to make them benefit from the project. It includes:

- the relocation of living quarters;
- finding acceptable new employment for those whose jobs are affected;
- restoration (or compensation) of affected productive resources such as land, workplaces, trees and infrastructure;
- restoration of other adverse effect on DPs’ living standards (quality of life) through land acquisition (such as the adverse effects of pollution);
- restoration of or compensation for affected private and public enterprises;
- restoration of adversely affected on cultural or common property.

**Rehabilitation:** means: the restoration of the DPs’ resource capacity to continue with productive activities or lifestyles at a level higher or at least equal to that before the project.

The objective of this RAP is to provide a plan for the resettlement and rehabilitation of the DPs so that their losses will be compensated and their standards of living will be improved or at least restored to the pre-project levels. To achieve these objectives the plan provides for rehabilitation measures so that the income earning potential of individuals are restored to sustain their livelihoods. Affected productive resources of businesses (enterprises including shops) and public property. Infrastructure and cultural property will also be improved or at least restored to their pre-project levels.

**Compensation and resettlement measures:** To address the following impacts of the involuntary taking of land: (i) relocation or loss of shelter; (ii) lost of assets or access to assets; or (iii) loss of income sources or means of livelihood, whether or not the affected persons must move to another location, a RAP or a resettlement policy framework will be prepared to cover the following:

- (a) The RAP or resettlement policy framework includes measures to ensure that the displaced persons are:
  - (i) informed about their options and rights pertaining to resettlement;
  - (ii) consulted on, offered choices among, and provided with technically and economically feasible resettlement alternatives; and
  - (iii) provided prompt and effective compensation at full replacement cost<sup>①</sup>, for losses of assets attributable directly to the project.
- (b) If the impacts include physical relocation, the RAP or resettlement policy framework includes measures to ensure that the displaced persons are:
  - (i) provided assistance (such as moving allowances) during relocation; and

- (ii) provided with residential housing, or housing sites, or, as required, agricultural sites for which a combination of productive potential, locational advantages, and other factors is at least equivalent to the advantages of the old site.
- (c) Where necessary to achieve the objective of the policy, the RAP or resettlement policy framework also includes measures to ensure that displaced persons are:
  - (i) offered support after displacement, for a transition period, based on a reasonable estimate of the time likely to be needed to restore their livelihood and standards of living;
  - (ii) provided with development assistance in addition to compensation measures described in paragraph 4(a)(iii), such as land preparation, credit facilities, training, or job opportunities.

**Cut-off date:** The date of publication of the bulletin of land acquisition and relocation in this project. After this date, the displaced persons shall not build, rebuild or expand their houses; shall not change the uses of their houses and land; shall not lease their land, lease, sell or purchase their houses; and any person that moves in after this date shall not qualify as a displaced person.

**Replacement cost:** is the method of valuation of assets that helps determine the amount sufficient to replace lost assets and cover transaction costs. In applying this method of valuation, depreciation of structures and assets should not be taken into account. For agricultural land, it is the pre-project or pre-displacement, whichever is higher, market value of land of equal productive potential or use located in the vicinity of the affected land, plus the cost of preparing the land to levels similar to those of the affected land, plus the cost of any registration and transfer taxes. For land in urban areas, it is the pre-displacement market value of land of equal size and use, with similar or improved public infrastructure facilities and services and located in the vicinity of the affected land, plus the cost of any registration and transfer taxes. For houses and other structures, it is the market cost of the materials to build a replacement structure with an area and quality similar to or better than those of the affected structure, or to repair a partially affected structure, plus the cost of transporting building materials to the construction site, plus the cost of any labor and contractors' fees, plus the cost of any registration and transfer taxes. In determining the replacement cost, depreciation of the asset and the value of salvage materials are not taken into account, nor is the value of benefits to be derived from the project deducted from the valuation of an affected asset. Where domestic law does not meet the standard of compensation at full replacement cost, compensation under domestic law is supplemented by additional measures so as to meet the replacement cost standard. Such additional assistance is distinct from resettlement measures to be provided under other clauses in OP 4.12, para. 6.

**Involuntary land acquisition :**

- (a) the involuntary taking of land resulting in

- (i) relocation or loss of shelter;
  - (ii) lost of assets or access to assets; or
  - (iii) loss of income sources or means of livelihood, whether or not the affected persons must move to another location; or
- (b) the involuntary restriction of access<sup>9</sup> to legally designated parks and protected areas resulting in adverse impacts on the livelihoods of the displaced persons.

## Abbreviations

AAOV	-	Average Annual Output Value
AH	-	Affected Household
AP	-	Affected Persons
DMS	-	Detailed Measurement Survey
FGD	-	Focus Group Discussion
LA	-	Land Acquisition
M&E	-	Monitoring and Evaluation
MLS	-	Minimum Living Security
PRC	-	People's Republic of China
RIB	-	Resettlement Information Booklet
RAP	-	Resettlement Action Plan
PIU	-	Project Implementation Unit
PMO	-	Project Management Office
TNC	-	The Nature Conservancy

## Units

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

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# Executive Summary

## 1 Basic Information of RAP

1. World Bank-financed Zhejiang Qiandao Lake and Xin'an River Basin Water Resources and Ecological Environment Protection Project (hereafter referred as "the project"), involves Chun'an County and Jiande City respectively. The total investment of the project is about 293.46 million USD including the 150 million USD of World Bank loan. The project will be started in 2018 and continues for six years.
2. This RAP is prepared for the project contents proposed for both Chun'an County and Jiande City. The project in Chun'an County (Chun'an Sub-project) involves 23 towns, and 5 sub-projects. They are: (i) Chun'an County Rural Drinking Water Safety Promotion Component, (ii) Chun'an County Comprehensive Management of Small Watershed Component, (iii) Chun'an County Embankment Reinforcement and River Improvement Component, (iv) Chun'an County Agricultural Non-Point Source Pollution Control Component, (v) Chun'an County Forest Ecological Restoration Project. According to the investigation, the resettlement impacts of Chun'an County involves the permanent land acquisition, temporary land occupation, and ground attachment. Among them, Chun'an County Rural Drinking Water Safety Promotion Component involves permanent land acquisition and temporary land occupation; comprehensive management of small watershed, Embankment Reinforcement and River Improvement Component involve temporary land occupation; Agricultural Non-Point Source Pollution Control Component and Forest Ecological Restoration Component do not cause any resettlements. The beneficial area of this project involves 26 townships with a total beneficial population of 541,900 persons, including 447,900 persons from Chun'an and 94,000 persons from Jiande City.
3. The project in Jiande City (Jiande Sub-project) involves 3 towns and 2 sub-districts. It includes a total of 4 components, namely (i) Municipal Engineering Component, (ii) Water Conservancy Facility Renovation Component, (iii) Agricultural Non-point Source Pollution Control Component, (iv) Plantation Restoration and Afforestation Component. According to the investigation, the components of Municipal Engineering and Water Conservancy Facility Renovation involve the permanent land acquisition and temporary land occupation while the rest component do not cause any resettlement impacts.

## 2 Resettlement Impacts

4. The direct beneficiary area of the project is whole Chun'an County and 5 Townships of Jiande City. The project will use constructed on a total of 3236.24 mu land (Chun'an County: 1411.09 mu; Jiande City: 1825.15 mu), among which, 238.4 mu collective-owned land will be permanent acquisitioned, including 39.4 mu in Chun'an and 199 mu in Jiande. During the construction period, 2997.84 mu land will be temporarily occupied (Chun'an County: 1371.69 mu; Jiande City: 1626.15 mu).
5. About 3447 households with 12434 persons will be affected, including 1585 HHs with 6685 persons in Chun'an County (71HHs, 272 persons caused by permanent land acquisition 1514 HHs 6413 persons caused by temporary land occupation) and 1862 HHs with 5749 persons in Jiande (63 HHs 196 persons caused by permanent land acquisition and 1799HHs 5553 persons caused by temporary land occupation).

### Impacts of Permanent Land Acquisition and Temporary Land Occupation

	Permanent Land Acquisition			Temporary Land Occupation		
	Households	Persons	Area (mu)	Households	Persons	Area (mu)
Chun'an	71	272	39.4	1514	6413	1371.69
Jiande	63	196	199	1799	5553	1626.15
Total	134	468	238.4	3313	11966	2997.84

6. The permanent acquisition of collectively-owned land affects 22 administrative villages, covering about 238.4 mu of collective land, and affecting 134 households with 468 persons. Specifically, in Chun'an County total 39.4 mu of land will be permanently acquisitioned, affecting a total of 71 households with

272 persons. While in Jiande City, a total of 199 mu collective woodland will be permanently acquisitioned, affecting a total of 63 households with 196 persons. Based on the field investigation, the permanent acquisition of collectively-owned land in Chun'an County affects 12 administrative villages with only 0.03%-2.82% of the arable land loss ratio. For the project in Chun'an County, the rural collective land acquisition is totally the woodland. As the non-agricultural income is the main livelihood source for those affected persons. The impact of land acquisition is quite limited. This sub-project does not involve house demolition.

7. This project occupies a total of 2997.84 mu land temporarily, affecting 3447 households with 12434 persons. In Chun'an County, the project occupies 1371.69 mu land temporarily with impacting total 1514 households and 6413 persons. While in Jiande City, the project occupies 1626.15 mu land temporarily with impacting total 1862 households and 5749 persons.
8. Some precautionary measures will be adopted during construction to reduce the negative impacts of the project such as, the time of excavating pipe network is limited in winter to 1) reduce water and soil erosion, 2) reduce the occupation of arable land. During harvest season the construction amount will be reduced. 3) The construction information will be conveyed to the APs in advance, so as to reduce the agricultural loss of APs; 4) restoration of arable land. During the construction period, the mellow soil will be centralized and refilled to reduce the farmers' loss.

### **3 Project Policies, Principles and Entitlements**

9. Adopting the principle of 'minimizing resettlement impacts', extensive consultations have been conducted with the APs on the issues including project site selection and compensation standards. The project plan is constantly optimized. The resettlement policy of this project will follow relevant policies of the People's Republic of China, Zhejiang People's Government, Local Authorities and of World Bank, such as the Land Administration Law of the People's Republic of China (2004), the Decisions for Further Reform and Strengthen Land Administration of State Council ([2004] No. 28) and OP4.12, etc.
10. The permanent LA, temporary land occupation and ground attachment compensation, in Chun'an County, are operated in accordance with the Notice of the Updated Benchmark Land Price in Chun'an County (CZF [2016] No.10), and the Notice on the Re-released Integrated Location-based Price of Chun'an County Collective Land Acquisition. The permanent LA in this project mainly involves woodland, the APs are ineligible to be incorporated into the social security system. In this way, the compensation for the permanent LA of the project will be compensated according to the integrated Location-based land acquisition prices, the compensation will be paid directly to the APs by the Land Resource Bureau of Chun'an County. The temporary occupation compensation will be paid directly to the APs. The payment of ground attachments will be paid to the property owners by the Land Resource Bureau of Chun'an County in accordance with the replacement price.
11. While in Jiande City, the payment for permanent LA, temporary land occupation and ground attachment compensation are implemented in accordance with the Notice on Adjusting the Integrated Location-based LA Compensation Rates in Jiande City (JZH [2014] No.119). The compensation for the permanent LA of the project will be compensated according to the integrated Location-based land acquisition prices. As the permanent land acquisition of Jiande sub-project only involves woodland, not involving APs' livelihood. According to the regulation, the LA compensation rate for woodland is 24,000 Yuan/mu. The compensation will be paid directly to the APs. The temporary land occupation compensation will be paid directly to the APs according to the actual situation. The ground attachments will be reimbursed to the property owners in accordance with the replacement price.
12. The Cut-off Date for the definition of compensation eligibility is July 22, 2016.

### **4 Income and Livelihood Support Strategy**

13. Chun'an County: The permanent LA, temporary land occupation and ground attachment compensation are operated in accordance with the Notice of the Updated Benchmark Land Price in Chun'an County (CZF [2016] No.10), and the Notice on the Re-release Integrated Location-based Price of Chun'an County Collective Land Acquisition.
14. The permanent LA of this project mainly involves woodland, the APs are ineligible to be incorporated into the social security system. In this way, the compensation for the permanent LA of the project will be compensated according to the integrated Location-based land acquisition prices, the compensation will be paid directly to the APs by the Land Resource Bureau of Chun'an County. The temporary occupation compensation will be paid directly to the APs according to the actual situation. The ground attachments will be reimbursed to the property owners by the Land Resource Bureau of Chun'an County in accordance with the replacement price.
15. In order to ensure the safety of compensation on the permanent and temporary LA, payment of compensation will not be paid in cash but will be transferred to a special joint / individual bank account of APs. This will ensure financial security of APs, effectively prevent fund being withheld and misappropriation. At the same time, local township officers will guide the APs Regarding the proper utilization of compensation payment.
16. Moreover, in order to improve the benefits of the project and to reduce the negative impacts for the APs, some skill trainings and job opportunities will be provided to the APs.
17. Jiande City: The compensation for permanent LA, temporary land occupation and ground attachment are operated in accordance with the Notice on Adjusting the Integrated Location-based LA Compensation Rates in Jiande City (JZH [2014] No.119). The compensation for the permanent LA of the project will be compensated according to the integrated Location-based land acquisition prices and will be paid directly to the APs. The temporary occupation compensation will be paid directly to the APs according to the actual situation. The ground attachments will be reimbursed to the property owners in accordance with the replacement price. Moreover, in order to improve the benefits of the project and to reduce the negative impacts for the APs, some skill trainings and job opportunities will be provided to the APs.

## **5 Supports for Vulnerable Groups and Women**

18. No vulnerable group found in the project area, the affected females have the same legal rights with the affected males. This project will take a series of measures to ensure that women's rights and interests are guaranteed during the preparation and implementation phase of the project. For example, affected women will receive information relating to LA and must ensure participation in LA and public consultation. The compensation agreement must be signed by both husband and wife. In skill training, priority is given to the affected women's labor to ensure that their economic status is not compromised. To ensure that a certain number of women (at least 50% of total affected women) can access to non-skilled jobs during the project construction process.

## **6 Public Participation and Information Disclosure**

19. All APs have been informed of the key points of this RAP by various means and involved in the project, such as meetings, interviews, FGDs, public participation meetings and community consultations, and their opinions have been well incorporated into this RAP.
20. During the project preparation phase, the support teams have been established in all affected villages. 3—5 representatives each village, which include women and village leaders. While in the RAP preparation phase, many issues that include policy advocacy, compensation and livelihood/income restoration have been discussed with the APs. Meantime, the PMO encourages the APs to participate in the resettlement and reconstruction work with the support of holding symposiums. Moreover, measures of enhancing policy advocacy and public participation will be improved through other channels and tools, such as notice and mobilization.

21. During the project implementation phase, PIUs officers will explain the relevant policies and regulations, compensation standards, and resettlement programs, etc., so that APs can understand specific issues, and will be able to make adequate arrangements. Participation is also of equal importance and the strategy to encourage participation is included in RAP. Copies of RIBs, which contain key information, will be provided to the affected persons before RAP implementation. The RAP will also be issued on World Bank's website and local government's website.

## **7 Grievance Redress Mechanism**

22. Establishing a Complaints / Disputes Resolving Management System (CRMS) aims to timely resolve the issues faced by the APs during compensation and resettlement. The APs can appeal against any issue they faced during the resettlement and compensation. The Local Government Agencies (LGAs) and the village committees (VCs) will coordinate and put efforts to resolve the issues free of cost. The reasonable expenses incurred will be paid from the contingencies of the project.

## **8 Institutional Arrangement**

23. In order to ensure the successful implementation of the project, a project leading group in Chun'an County and Jiande City have been established for overall leadership and high-level coordination. Meantime, to ensure the smoothly implementation of RAP, more measures have been conducted, such as strengthening the communication with the Zhejiang province PMO, capacity buildings for resettlement agencies and PMOs, arranging full-time staffs in PMOs in charge of resettlement implementation, coordination and organizations. These personnel are well-experienced and engaged in land acquisition related work for many years.

## **9 Monitoring and Evaluation**

24. In order to ensure successful implementation of the RAP, internal and external resettlement monitoring will be carried out. The PMOs of Chun'an County and Jiande City will, assisted by Provincial PMO, and supporting experts in implementation phase, provide a semi-annual internal monitoring report to the WB during the resettlement process. WB PMO of Zhejiang Provincial Housing and Urban-rural Construction Department will engage an Independent external Resettlement Monitor to conduct the semi-annual external resettlement monitoring and evaluation. The cost of Monitoring and Evaluation is included into the estimated resettlement budget. The cost of external monitoring will be charged by the PMO of Chun'an County and Jiande City.

## **10 Resettlement Cost**

25. The resettlement cost of this project includes the cost of permanent LA, compensation for temporary land occupation, ground attachments, and related taxes, management fee. The total estimated resettlement cost for the project is 18.27184 million Yuan. In Chun'an County, the estimated resettlement cost is 7.76674 million Yuan. which includes 0.2336 million yuan for resettlement cost for comprehensive management of small watershed component 1.61192 million Yuan for Embankment Reinforcement and River Improvement Component; and 5.92122 million Yuan for rural drinking water construction project. In Jiande City, the estimated resettlement cost for the project is 10.5051 million Yuan. In which 4.776 million yuan is paid for permanent requisition of rural collective woodland land (45.46%). While, 62,700 Yuan will be paid for ground attachments (0.6%).

# 1 Basic Information of the Project

## 1.1 Construction Content and Resettlement Impacts

### 1.1.1 Construction Content

1. World Bank-financed Zhejiang Qiandao Lake and Xin'an River Basin Water Resources and Ecological Environment Protection Project involves Chun'an County (Chun'an Sub-project) and Jiande City (Jiande Sub-project). The project comprises three components, which are: Component 1: Landscape Management Improvement; Component 2: Water Resources Management Improvement; and Component 3: Institutional Capacity Building, Monitoring and Project Management. Component 1 includes the following 4 subcomponents: Low Impact Crop Production; Livestock Waste Management (LWM); Plantation Restoration and Afforestation; Wetland Management. Component 2 includes the following 3 subcomponents: Wastewater Management; Water Course Improvement; Rural Water Supply. Component 3 will finance technical assistance, training, research/studies, extension, awareness raising, monitoring and evaluation, as well as the project management. More specifically the project will support the following activities: Technical assistance and training; Research and Study program; Monitoring and Evaluation. The total investment of the project is about 293.46 million USD, including the World Bank loan of 150 million USD. The project of Chun'an County involves 23 towns, and a total of 5 sub-components. The beneficial area of this project involves 26 townships with a total beneficial population of 541900 persons, including 447900 persons from Chun'an and 94000 persons from Jiande City. The detail contents of the project is given below.

2. **Chun'an Sub-project** has 5 components as follows:

- **Component 1:** Chun'an County Rural drinking water safety promotion component: This component adopts two water supply manners. i) Existing Pipe Network extension. The water supply scope of the project includes Jiangjia Town, Zhongzhou Town, Linqi Town, Fuwen Township, Jieshou Township, Langchuan Township, Qiandao Lake Town, Fenkou Town and Zuokou Township, with a total of nine townships and towns and a total of 188 natural villages benefited from it. The designed water supply service population is 108200 persons and the total water supply amount is 0.19 million m<sup>3</sup>/d; ii) construct a new centralized water supply system crossing villages and towns. A total of 9 new water supply systems will be constructed under this component, includes Wangfu, Anchuan, Haashan, Pingmen, Fengshuoling, Baima, Zitong, Weiping and Jiangjia, and the total water supply service population is 109900, with the total supply amount is 19306 m<sup>3</sup>/d. The Component from the water plant and lay the pipe network is going to permanently Acquisition rural collective land, temporary land occupation and ground attachments. This component will involve permanent land acquisition, temporary land occupation and ground attachments.
- **Component 2:** Chun'an County Comprehensive management of small watershed component: The component is located in Hangzhou Chun'an County Wujiang Creek, Yuchuan Creek, Liudu Creek, Shangwu Creek, Zitong River a total of five watershed, involving Fenkou Town and Zhongzhou Town of Wuqiang Creek, Jiangjia Town and Langchuan Township of Liudu Creek, Anyang Township of Shangwu Creek, Zitong Town of Zitong Creek of Zitong River, a total of seven townships. The main task of this project is flood control, and the project combined with water landscape water ecology. The comprehensive management of the small watershed in Chun'an County is newly built (reconstruction, reinforcement) embankment, revetment about 89.30kma total of about 89.30km, new (altering and repairing) weir 66, and a river dredging of 16.00km. The construction of the project will ensure the safety of the undertakings of the persons' lives and property and the industrial and agricultural production on both sides of the river basin, and promote the development of the regional economy faster and more stable and maintain social stability. The Component only covers temporary land occupation.

- **Component 3:** Chun'an County Embankment reinforcement and river improvement component: The project will improve 227km river section, and the new reinforcement embankment length is 114.63km, including embankment reinforcement project new embankment 47.11km, river renovation project new embankment 67.52km. Rural river dredging remediation, some to prevent the reinforcement of the river sedimentation is also a large amount of dredging remediation. The new or modified weir a total of 50, which embankment reinforcement 2 reconstruction of the weir, river remediation project to build or rebuild 48 weirs. New railing 2.17km, new agricultural bridge 4. 2.17km new railings, 4 new agricultural bridges. The Component only involves temporary land occupation.
  - **Component 4:** Chun'an County Agricultural Non-point Source Pollution Control Project: Mainly consists of four parts: unified rule, pesticide bottle recycling, the promotion of organic fertilizer and liquid fertilizer distribution. The component mainly involves Weiping Town, Jiangjia Town, Zitong Town, Fenkou Town, Zhongzhou Town and Anyang Township. Unified rule is for the prevention and control of pests and diseases. Pesticide bottle recycling is used for pesticide bags and pesticide bottles in accordance with certain standards for recycling, unified treatment; the promotion of organic fertilizer is to increase the use of organic fertilizer, thereby reducing the use of fertilizers, reduce the pollution of the soil, liquid fertilizer distribution is the promotion of this organic fertilizer.
  - **Component 5:** Chun'an County Forest Ecological Restoration Project: The project mainly includes two parts: the ecological restoration of the barren mountain and the ecological restoration of the low efficiency coniferous forest. The inefficient coniferous forest restoration is mainly carried out on the pure forest of *Pinus massoniana* pure forest. The ecological restoration of Manglou Mountain is the replanting of the barren young forest, the growth of barren hills and wasteland afforestation and restoration of forests. The project involves Qiandao Lake Town, Wenchang Town, Shilin Town, Shangxiang Township, Fuwen Township, Zuokou Township, Jinfeng Township, Linqi Town, Weiping Town, Jiukeng Township, Song Village, Jiangjia Town, Zitong Town, Langchuan Township, Jieshou Township, Fenkou Town, Zhongzhou Town, DaShu Town, Fengshuling Town, and Anyang Township.
3. **Jiande Sub-project** has 4 Components, located in the 3 towns and 2 streets of Jiande City (county-level city), Hangzhou, Zhejiang Province. The 3 towns and 2 streets are Shouchang town, Hangtoun town, Datong town, Xin'anjiang Street and Yangxi Street.
- **Component 1:** Municipal Facilities Project includes forest road, Bridge Reconstruction Project, Sewage Treatment Plant Extension Project Phase - I and Forest Fire Emergency Channel Project. This component will involve permanent land acquisition, temporary land occupation and ground attachments.
  - **Component 2:** Water Conservancy Facilities Renovation Project: The main task is flood control, combined with water landscape water ecology. The construction of this project aims to protect the life, property, industrial & agricultural production on both sides of the basin and real time monitoring of the water quality change in Shouchang river basin. Only temporary land occupation involved in this project.
  - **Component 3:** Agricultural Non-point Source Pollution Control Project: By implementing the three major projects of Non-point Source Pollution Control Project, Planting Industry Non-point Source Pollution Control Project and Ecological Ditch Project, we will further improve the non-point source pollution control ability in the project area, promote water quality improvement, enhance the water ecological environment, to create a harmonious living environment of human water..
  - **Component 4:** Plantation Restoration and Afforestation: The construction of the project will adjust the forest structure of the project area, cover the forest vegetation, increase the forest area in the basin, improve the forest quality, enhance soil and water conservation, forest health, forest landscape, prevent forest fires, maintain forest ecosystem stability, enhance the ecological functions



of the forest ecological environment in Jiande City, such as various functions and comprehensive benefits. This Component has no resettlement impact.

**Table 1 Components of Jiande Sub-project**

Project Name	Component Name	Project Town / Community /street	Village	Project Construction Scale and Parameters	Resettlement Impact
<b>Municipal facilities project</b>	Bridge renovation project	Datong Town	Yongping Qingtian Xuhan	12 bridges reconstructed along Qingtan River	Temporary occupation of state - owned unused land, no APs
	Forest Fire Emergency Corridor Project	Xin'anjiang Street	Youyi	13 km Fire emergency access, 10 km drainage channel, 8800 m <sup>3</sup> , retaining wall, 40 drainage culvert, 4 public toilets.	Permanent collection of collective forest land, without affecting the livelihood of the farmers
		Construction of Baolingkeng Reservoir Central Section of Hangtuo Town	Wulong	9 km Fire emergency access road, including 8.203km main road lasts for, branch line length 0.815km, road width 4 meters.	Permanent collection of collective forest land, without affecting the livelihood of the farmers
	Ecological wetland project	Upstream of Shouchang River, Nanba section	Nanba	The proposed wetland area is the upgrading of the natural wetland in the original floodplain area, with a total area of about 16,247.2 m <sup>2</sup>	Within the river bank, the existing floating beach, only involved in the construction period of temporary land, no APs
	Sewage treatment plant phase I extension project	Shouchang Town	Shanfeng	Rough grille and pump station will utilize the land acquisitioned in first phase of the project	The construction of contents within the sewage treatment plant is located in a range of wall, the land was acquisitioned in 2008
<b>Water conservancy facilities renovation project:</b>	River comprehensive renovation project	Shouchang Town	Chengdong	Ecological embankment improvement , 1.8km (left and right bank, each is 0.9km)	Temporary occupation of state - owned land without compensation
	Wulongxi comprehensive management project	Hangtuo Town	Dadiankou Pengjia Qianyuan Wulong Hangtuo Shimuling Hangchuan	13 ecological weirs with the average height about 1.2 meters; 12.2 km ecological embankment improvement, 4.2 km embankment ecological restoration, 16.2 km embankment greening, 10.3 km drainage channels in forest area, 12 mountain pools; drip irrigation facilities Installation for 1,000 m land	Temporary land occupation, agriculture, forestry construction , unused land, involving no land acquisition
	Datong Town Datong Creek, Feng Jiayi, Qingtan Creek, Zhenyuan Creek comprehensive management project	Datong Town	Datong Sancun Langjia Xuhan Xikou Songxi Zhujia Shangma Zhenyuan Futang Chaoyang	Datong Creek, Fengjia Creek, Qingtan Creek, Zhenyuan Creek ecological comprehensive management, total length of 35.78 km, including river greening, village ecological revetment and so on.	temporary land occupation

<b>Project Name</b>	<b>Component Name</b>	<b>Project Town / Community /street</b>	<b>Village</b>	<b>Project Construction Scale and Parameters</b>	<b>Resettlement Impact</b>
			Qingtian Panshan		
<b>Agricultural non-point source pollution control project</b>		A total of Datong Town, Hang Town and Shouchang Town, 3 townships and 75 villages.		Organic fertilizer and soil testing formula fertilizer promotion; Pest and disease prevention and control; Aquaculture non - point source pollution control project; Construction of ecological ditch	Temporary land occupation
<b>Plantation Restoration and Afforestation</b>		Involving a total of 3 towns, 13 villages; two state-owned forest		Afforestation, Forest facies transformation, Health management	

### 1.1.2 Overview of Resettlement Impacts

4. According to the resettlement impacts survey, the project involves permanent land acquisition, temporary land occupation, and ground attachments.
5. Chun'an County rural drinking water safety promotion component involve permanent land acquisition and temporary occupation; comprehensive management of small watershed, embankment reinforcement and river improvement project of Chun'an County involve temporary land; agricultural non-point source pollution control and forest ecological restoration does not involve the resettlement impacts.
6. **Jiande Sub-project** involves permanent land acquisition, temporary land occupation, and ground attachments. Among them Water conservancy facilities renovation project involve permanent land acquisition and temporary occupation, Agricultural non-point source pollution control project and Plantation Restoration and Afforestation do not have resettlement impact.

### 1.1.3 Scale of Resettlement Impacts

7. Chun'an Sub-project affected 1586 households, 6685 persons, 39.4 mu of permanent land acquisition; permanent land acquisition involving 6 villages and towns, 12 villages, affecting 71 households, 272 persons. Temporary covers an area of 1371.69 mu, affecting 1514 households, 6413 persons. Among them:
  - Rural drinking water safety promotion component will permanently collect 39.4 mu of rural collective land, including 0.9 mu of arable land, 19.57 mu of forest land, 18.05 garden land, and 0.87 mu of other land types. The permanent collection of rural collective land involves 71 households and 272 persons. The sub project covers an area of 910.31 mu, all of which are rural collective land. Temporary covers 963 households, 4189 persons.
  - Comprehensive management of small watershed component involves temporary covers, covering an area of 58.4 mu, involving 56 households and 172 persons.
  - Embankment reinforcement and river improvement component involve temporary covers, covering an area of 402.98 mu, involving 495 households and 2052 persons.
8. The main resettlement impact of **Jiande Sub-project** is as follows:
  - The project will acquired 199 mu of collective forest land, a total of 63 households with 196 persons will be affected. Among that: Hangtou town acquiring 18 mu, affecting 33 households with 108 persons; Xin'anjiang street acquiring 155.80 mu, affecting 19 households with 53 persons; Yangxi street acquiring 25.20 mu, affecting 11 households with 35 persons.
  - The project covers a total of 1626.15 mu of land, of which 5 mu state-owned land, accounting for 3.01% of the temporary land; collective land 1621.15 mu, accounting for 99.69% of temporary land area. Temporary land occupation affected 1799 households, 5553 persons.
  - The total number of projects affected is 1862 households 5749 persons. Among that, collective forest land acquisition, affecting 63 households 196 persons. Temporary land occupation affected 1799 households, 5553 persons.
9. The main resettlement impacts of Chun'an Sub-project and Jiande Sub-project are listed in table 2 and table 3.

**Table 2 Resettlement Impacts of Chun'an Sub-project**

Unit: mu

Component	Permanently land acquisition				Subtotal	APs caused by permanently land acquisition		Temporary land occupation area		APs caused by Temporary land occupation	
	Collective land					AHHs	APs	Collective land	Subtotal	AHHs	APs
	Arable land	Woodland	Garden	Other							
Chun'an County rural drinking water safety promotion component	0.9	19.57	18.05	0.87	39.4	71	272	910.31	910.31	963	4189
Chun'an County comprehensive management of small watershed component	0	0	0	0	0	0	0	58.4	58.4	56	172
Chun'an County Embankment reinforcement and river improvement component	0	0	0	0	0	0	0	402.98	402.98	495	2052
<b>Total</b>	<b>0.9</b>	<b>19.57</b>	<b>18.05</b>	<b>0.87</b>	<b>39.4</b>	<b>71</b>	<b>272</b>	<b>1371.69</b>	<b>1371.69</b>	<b>1514</b>	<b>6413</b>

**Table 3 Resettlement Impacts of Jiande Sub-project**

Unit: mu

Category		Municipal facilities project	Water conservancy facilities renovation project	Agricultural non-point source pollution control project	Plantation Restoration and Afforestation	Sub total	
Collect collective land	mu	199	0	0	0	199	
Among that: cultivated forest land	mu	199	0	0	0		
Temporary occupation of collective land	mu	11	1615.15	0	0	1626.15	
APs	Land acquisition	Households	63	0	0	63	
		Persons	196	0	0	196	
	Temporary land occupation	Households	16	1783	0	0	1799
		Persons	79	5474	0	0	5553
Total		Persons	275	5474	0	0	5749

## 1.2 Project Impact Area

10. The impacts of **Chun'an Sub-project** include the effects of permanent land acquisition, temporary land cover, ground appendage effects and changes in the state land use patterns below the 108 meters water level.

- (a) Permanent Land Acquisition Affected Areas: 12 administrative villages project permanent land acquisition of Wangfu Township Xinhe Village, Weiping Town Yeja Village, Weiping Town Qinkeng Village, Weiping Town Longtan Village, Weiping Town Houchuankou Village, Weiping Town Kaochuan Village, Weiping Town Pengcun Village, Weiping Town Feiyuan Village, Zhongzhou Town Xiashan Village, Pingmen Township Pingmen Village, Fengshuling Town Zhaikeng Village and Guanchuan Village, Zitong Town Lianxi Village, 12 administrative villages in 7 townships, will affect 71 households (272 persons).

- (b) Temporary Occupation of Land Affected Area. The project involves a total of 127 administrative villages, temporary affects Langchuan Township Fenkou town, Dashu Town, An'yang Township, Lishang Township, Lin Qi Town, Jiangjia Town, Fuwen Township, Pingmen Township, Weiping Town, Zuokou Township, Fengshuling Town, Wenchang Town, Yaoshan Township, Wangfu Township, Songcun Township, Jiukeng Township, Jinfeng Township, Jieshou Township and An'yang Township, including 20 villages and towns in 27 administrative.
11. The impact of the resettlement of **Jiande Sub-project** includes permanent rural collective land acquisition, temporary land occupation, ground attachments. The direct impact areas of the project are mainly distributed in three townships (Shouchang Town, Hangtou Town, Datong Town) and two streets (Xin'anjiang Street and Yangxi Street ) of the Jiande City, Acquiring rural collective land directly affect the population of 63 households (196 persons) and Temporary land occupation of 1799 households (5553 Person).

### 1.3 Project Progress

12. The project progress of **Chun'an Sub-project** is shown in table 5.

**Table 4 Progress of Chun'an Sub Project**

Project	Feasibility Study		Environmental Assessment		Resettlement Program	
	Progress	PIU	Progress	PIU	Progress	PIU
Comprehensive management of small watershed project	Complete	Zhejiang water conservancy and Hydropower Survey Design Institute	Complete	Zhejiang water conservancy and Hydropower Survey Design Institute	2017.11	National Research Center for Resettlement, Hohai University
Embankment reinforcement and river improvement project	Complete	Zhejiang water conservancy and Hydropower Survey Design Institute	Complete	Zhejiang water conservancy and Hydropower Survey Design Institute		
Rural drinking water safety promotion component	Complete	Zhejiang water conservancy and Hydropower Survey Design Institute	Complete	Zhejiang Huanlong environmental protection Co. Ltd.		

**Table 5 Land Acquisition Pre-examination Status**

Sr. No.	Component Name	Permanent Land Occupation or Not	Examination and Approval of Project Land Use
1	comprehensive management of small watershed component	No	on-going
2	Embankment reinforcement and river improvement component service area	No	on-going
3	Rural drinking water safety promotion component	Yes	on-going

## 1.4 Measures to Reduce the Resettlement Impacts

### 1.4.1 Project Design and Resettlement Principle

13. To reduce land acquisition and house demolition in the stage of feasibility study, the following principles will be considered:

- Avoid or minimize the occupation of existing and planned residential areas;
- Avoid or minimize the occupation of high quality arable land;
- Avoid or minimize the use of environmental sensitive areas;
- Use existing national and local roads to the construction areas.

### 1.4.2 Project Planning and Design Phase

14. The project authorities have designed some affective measure in planning and design phase to reduce the construction impacts of the project on social and economic condition of the locals.

- In the planning phase of the project, to reduce land acquisition and resettlement to reduce the negative impact of the project on the local economy used as a key factor in project optimization selection.
- In the process of locating the layout of the project, the design unit makes reasonable analysis of the line direction, laying the pipe network in the middle or edge of the road, optimizing the construction methods, minimizing the housing demolition.
- Optimization design, reasonable arrangement of the project. As far as possible occupy the wasteland, sloping land and state-owned and minimize the acquisition of arable land.

15. The optimization measures and effects of Chun'an Sub-project and Jiande Sub-project in the planning and design phase are shown in table 7 and table 8.

**Table 6 Measures to reduce the resettlement impacts of Chun'an Sub-project and the effects**

Serial number	Component	Main optimization measures	results
1	Wangfu water works and supporting pipe network project	Pipeline optimization, as far as possible with the planning road synchronization construction	reduced the land acquisition area and affected ground attachments, and reduced the temporary land occupation
2	Yeji water works and supporting pipe network project	Site optimization scheme: Program 1 is build a new scheme in An'chuan Village waterworks; Program two is expand on the original site of the Yeji waterworks	The original An'chuan Village for land acquisition contradiction, and land is the basic farmland pre An'chuan Village, is regulated, so held a forum for re siting, the new factory cited the expansion of the existing leaf spring water plants
3	Xiashan water works and supporting pipe network project	Pipe network construction mode optimization: basically adopt excavation road and along planning road construction, road direction	Reducing the impact of road construction, reducing the temporary land area and the number of resettlement



Serial number	Component	Main optimization measures	results
		and width optimization	
4	Pingmen water works and supporting pipe network project	Select the higher oil tea garden to reduce the occupation of arable land	Avoid moving graves, reducing excavation and temporary land occupation
5	Fengshuling water works and supporting pipe network project	The pipeline will be optimized, as far as possible along the embankment, field or along the road, high water tank as far as possible to select the construction sites have been acquired, the use of gravity flow water supply	It reduced the land acquisition and removal and affected ground attachments, and reduced the excavation of earthwork and the temporary occupation of land
6	Baima water works and supporting pipe network project	Pipeline and road direction optimization, pipe network as far as possible along the embankment, fields or along the road laying, the road as far as possible to avoid demolition	Reduced land acquisition and demolition, reduced earthwork excavation and temporary land occupation
7	Zitong water works and supporting pipe network project	The pipeline is optimized, as far as possible along the embankment, field or along the road	Avoid demolition, reduce excavation and temporary land occupation

### 1.4.3 Construction Stage of Project

- Reduce the impacts of pipeline excavation. In the process of pipeline excavation, the working surface will be properly spray to keep a certain humidity. Meanwhile, the fence or partial fence will be adopted to reduce the diffusion range of construction dust. And dust emissions. Building materials and construction waste will be cleaned in time. Beware of truck loading, and try to cover, airtight measures, reduce the spilled ways and timely cleaning the dirt and dust scattered on the road.
- Pipe network excavation. Network excavation as far as possible in the fall and winter season, so that soil erosion can be reduced. Especially during the Tour season, the excavation of the network will be avoided and the impacts on the local tourism will be reduced.
- Does not utilize arable land during the crop season.
- To reduce the constructions impact on farmer's cultivation and harvesting, it is better to avoid the construction in the harvesting season.
- Disclose construction information in advance: The project construction team needs to inform the affected farmers in advance to reduce the loss of agricultural input / output
- Farmland restoration. In the course of construction, the soil of the tillage layer needs to be piled up centrally and backfilled to reduce the losses of the farmers.

### 1.4.4 Land Acquisition and Implementation Stage of Project

16. When land acquisition and resettlement are unavoidable, in order to reduce the project impacts on the local, the following measures will be taken:
  - Strengthen the collection of basic data and analyzed the local socio-economic status and future development in depth, working out feasible RAP according to the local conditions and ensure that the persons who affected by the project are not hurt by the component construction.

- Encourage public participation actively, strengthen information disclosure and accept the supervision of APs.
- Strengthen the internal and external monitoring, establish efficient and unobstructed feedback mechanism and channel. Shorten the information processing cycle as much as possible in order to ensure all kinds of problems which appeared in the process of the project implementation can be resolved timely.

## **1.5 Linkage Project<sup>2</sup> Identification**

17. Sewage treatment plant phase-I extension project of Jiande Sub-project is located in Shanfeng Village, Chengnan City (Shouchang). The Land Acquisition compensation and compensation for crops have been completed in 2008. In March 2017, the resettlement team from Hohai University conducted the resettlement due diligence on the land acquisition. The survey results show that: the APs are relatively satisfied with the compensation, resettlement policies and resettlement results. Their livelihood and income have been restored. Relevant resettlement due diligence can be found.

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<sup>2</sup> According to World Bank policy, the linkage projects refer to those that: (a) have a direct and significant relationship with Bank-assisted projects; (b) It is necessary to achieve the objectives set out in the project documents; (c) Projects carried out with project over the same period, or planned for the same period as project.

## 2 Project Impact

### 2.1 Project impact survey

18. According to the requirements from World Bank and Zhejiang Provincial PMO, PIUs, with the assistance of National Research Center for Resettlement of Hohai University, co-conducted the impacts survey with local township government, County Construction Bureau, Land Resources Bureau, Environmental Protection Bureau, Water Resource Bureau and other departments of Chun'an County separately in February, June, July, September of 2017. The cut-off day was set up as the day of July 22, 2016, agreed upon by the World Bank task team, provincial and municipal agencies
19. The APs participated in the impact survey. The survey team collected the APs' opinions on land acquisition and resettlement, and carried out extensive consultations. The social and economic investigation team also carried out the sampling questionnaire surveys within the affected areas. As a result, a total of 122 households (Chun'an County 103 households, Jiande City 19 households) were surveyed. The impact survey process are shown in table 9 and table 10.

**Table 7 Chun'an County Impacts Survey Process**

Serial number	Component	Investigation time	Investigation method	Participated Investigation agencies
1	Chun'an County rural drinking water safety promotion component	Feb 12, -Feb 25; June 27, -July 5, 2016	impacts survey and socioeconomic surveys for APs	The Chun'an county government, the township government concerned, and the Hohai University
2	Chun'an County comprehensive management of small watershed component	Feb 12, -Feb 25; June 27, -July 5, 2016	impacts survey, and socioeconomic surveys	The Chun'an county government, the township government concerned, and the Hohai University
3	Chun'an County embankment reinforcement and river improvement component	Feb 12, -Feb 25; June 27, -July 5, 2016	impacts survey, and socioeconomic surveys	The Chun'an county government, the township government concerned, and the Hohai University

**Table 8 Jiande Sub-Project Impacts Survey Process**

Project name	Survey time	Survey method	Survey organization
Municipal facilities project	February 12 - February 25, 2016; June 27 - July 5, 2016	APS household surveys, field surveys and household socioeconomic surveys	Jiande City Development and Reform Commission, Related township government, Hohai University
Water conservancy facilities renovation project	February 12- February 25, 2016; June 27 - July 5, 2016; September 17, 2016	APS household surveys, field surveys and household socioeconomic surveys	Jiande City Development and Reform Commission, Related township government, Hohai University

#### 2.1.1 Public Participation in Project

20. Under the guidance of experts in technical assistance and consultation, Chun'an County World Bank loan leading group, project design unit and Hohai University investigation group, have carried out a series of socio-economic surveys and public opinion consultation (including 30% women) since February 2016. During the preparation of the project, Chun'an County and Jiande City World Bank loan leading group, Project implementation unit and Project design unit had extensive negotiations about the land acquisition and resettlement of this project. Public participation activities in the project are detailed in table 11.

**Table 9Public participation which has already been launched**

Component	Time	Location	Participants	The reaction problems of the affected person	Measures
Comprehensive management of small watershed component	Feb,2016 -July,2017	Chun'an Water Conservancy Bureau	Chun'an County World Bank loan leading group, staff of investigation organization, Land Resources Bureau, Water Conservancy Bureau, Water Conservancy Stations, cadres of various Township, Towns and Villages, representatives of affected population	Compensation standard for d temporary land occupation; Land quality after reclamation	Timely public standards of permanent land acquisition, temporary land occupation; Topsoil will be concentrated and backfilled in the process of temporary land occupation; Carry out environmental management plan strictly according to environmental impact report
Embankment reinforcement and river improvement component		Chun'an Water Conservancy Bureau		Treatment of construction waste water, construction waste and so on during construction	Strict requirements of the construction team in accordance with environmental protection requirements to discharge construction wastewater, regular cleaning of construction waste and daily cleaning of construction waste; Strictly implement the environmental management plan according to the requirements of the environmental impact report
Rural drinking water safety promotion component	Feb,2016 -July,2017		Chun'an County World Bank loan leading group, staff of investigation organization, Land Resources Bureau, Water Conservancy Bureau, Water Conservancy Stations, cadres of various Township, Towns and Villages, representatives of affected population	Compensation standards of young crops; Procedures and fees of grave relocation ; Temporary employment; The quality guarantee of land reclamation; Construction time ; compensation standard for permanent land acquisition	Publication of Resettlement Information Booklet on time; Land Resources Bureau, Resettlement planning agencies and other departments to carry out policy advocacy; Negotiate grave removal procedures with affected households; Topsoil will be concentrated and backfilled in the process of temporary land occupation; Carry out environmental management plan strictly according to environmental impact report
				Impacts of noise during construction	Strict requirements, the construction party will be built within the specified time, night construction is strictly prohibited, put an end to the construction behavior which will affect the daily life of farmers; Carry out environmental management plan strictly according to environmental impact report

**Table 10 Public participation which has already been launched**

Component	Time	Location	Participants	The reaction problems of the affected person	Measures
Municipal facilities project	Feb,2016 -March,2016	Jiande City Development and Reform Commission	Staff of investigation organization, representatives of Shouchang Town, Hangtoun Town and Datong Town. affected population	Compensation standard for permanent land acquisition and temporary land occupation; Land quality after reclamation	Timely public standards of permanent land acquisition, temporary land occupation; Topsoil will be concentrated and backfilled in the process of temporary land occupation;
				Construction waste water during construction, construction waste and other treatment	Strict requirements of the construction team in accordance with environmental protection requirements to discharge construction wastewater, regular cleaning of construction waste and daily cleaning of construction waste
Water conservancy facilities renovation project	Feb,2016 -July,2016	Hangtoun Town,	affected population	crop compensation standard; temporary employment; post-reclamation quality assurance	timely disclosure of RIB; Land Resources Bureau, and other departments to carry out policy advocacy; Topsoil will be concentrated and backfilled in the process of temporary land occupation; Strictly implement the environmental management plan according to the requirements of the environmental impact report

## 2.2 Project Impact Scope

21. The impact type of the project includes permanent land acquisition and temporary land occupation mainly caused by the permanent comprehensive management of small watershed, Embankment reinforcement and river improvement component, agricultural non-point source pollution control and forest ecological restoration projects do not cause any resettlement.
22. At this stage, the project's permanent land acquisition and temporary land use are determined according to feasibility study report. According to statistics, Chun'an county rural drinking water safety project to enhance the permanent land acquisition and temporary land are related to the comprehensive control project of 6 towns and 12 administrative villages in Chun'an County, small watershed temporary land covering 2 townships, 13 administrative villages in Chun'an county and river embankment reinforcement engineering of temporary land involving 20 townships and 110 villages. The scope of the project resettlement is shown in table 13.

**Table 11 Resettlement Impacts Scope**

Serial number	Component	District (city / county)	Township /sub-district	Affect villages / communities			
				Land acquisition	House demolition	Land acquisition and removal	Temporary occupation
1	Chun'an County rural drinking water safety promotion component	Chun'an County	Wangfu Township, Pingmen Township, Weiping Town, Zhongzhou Village	Xinhe Village, Yejia Village, Guanchuan Village, Pingmen Village, Longtan Village, Village, Kaochuan Village, Pengcun Village, Feiyuan Village	Not involve	Not involve	Xinhe Village, Yejia Village, Guanchuan Village, Pingmen Village, Longtan Village, Village, Kaochuan Village, Pengcun Village, Feiyuan Village
2	Chun'an County comprehensive management of small watershed component	Chun'an County	An'yang Township, Zitong Village	Not involve	Not involve	Not involve	Fanjia Village, Hongshan'ao Village, Huangjiayuan Village, Changshu Village, Wulong Village, Huang Village, Yejiashuang Village, Bingfeng Village, Helian Village, Jiemeng Village, Jiangtong Village, Hujiang Village, Changning Village
3	Embankment reinforcement and river improvement service area	Chun'an County	Wangfu Township, Songcun Township, Fuwen Township, An'yang Township, Fengshuling Town, Lishang Township, Zuokou Township, jiangjia Town, Qiandaohu Town, Jieshou Township, Dashu Town, Wenchang Town, Pengmen Township, Yaoshan Township, Linqi Town, Weipin Town, Jinfeng Township, Jiukeng Township, Fenkou Town, Langchuan Township	Not involve	Not involve	Not involve	Hehuaping Village, Xinfan Village, Xinhe Village, Mashan Village, Huaping Village, Wangfu Village, about 110 villages

## 2.3 Project Impacts

23. According to the physical investigation and analysis, the main categories of the project include:

- Permanent land acquisition of rural collective land;
- Temporary land occupation;
- ground attachments.

### 2.3.1 Project affects population

24. Using the World Bank loan, the total impact population of Xin'anjiang Qiandao Lake watershed ecological environment project was 3447 and 12434 persons. Among that: Chun'an involving 1585 households with 6685 persons (permanent land acquisition affecting 71 households (272 persons), temporary land affecting 1514 households (6413 persons) Jiande City involving 1862 households with 5749 persons (permanent land acquisition affecting 63 households (196 persons) temporary land affecting 1799 households (5553 persons).

25. **Chun'an County** rural drinking water safety promotion component involving 1034 households, 4461 persons (permanent land acquisition affecting 71 households (272 persons) while temporary land affecting 963 households (4189 persons), Comprehensive Management of Small Watershed Component affects 56HHs and 172 persons; and Embankment Reinforcement and River Improvement Component affects 495HHs and 2052 persons. The direct impact of the project on the population is shown in table 10.

26. **Jiande Sub-project** has a direct impact on the population of 5749 persons. Among them, Shouchang Town 11 households (34 persons), Hangtou Town 182 households (614 persons), Xin'an Street 19 households (53 persons), Yangxi Street 11 households (35 persons). Temporary land occupation affected 1799 households (553 persons).

**Table 12 Affected population of Chun'an Sub-population**

Serial number	Component	Land acquisition impacts		Temporary occupation impacts		subtotal	
		household	persons	household	persons	household	persons
1	Chun'an County rural drinking water safety promotion component	71	272	963	4189	1034	4461
2	Chun'an County comprehensive management of small watershed component	0	0	56	172	56	172
3	Chun'an County Embankment reinforcement and river improvement	0	0	495	2052	495	2052
Total		71	272	1514	6413	1585	6685

**Table 13 Affected population of Jiande Sub-project**

Town / Street	Village Community /	Land acquisition		Temporary occupation land		Total		
		Households	persons	Households	persons	Households	persons	Female
Shouchang Town	Dongmen	0	0	11	34	11	34	15
	Subtotal	0	0	11	34	11	34	15
Hangtou	Qianyuan	0	0	19	61	19	61	30
	Wulong	33	108	23	74	56	182	89
	Hangtou	0	0	18	63	18	63	31



Town / Street	Village Community /	Land acquisition		Temporary occupation land		Total		
		Households	persons	Households	persons	Households	persons	Female
	Hangchuan	0	0	14	46	14	46	23
	Shimuling	0	0	17	63	17	63	32
	Pengjia	0	0	13	45	13	45	22
	Juetang	0	0	14	48	14	48	24
	Dadiankou	0	0	31	106	31	106	52
	Subtotal	33	108	149	506	182	614	303
Datong Town	Yongpign	0	0	65	196	65	196	95
	Qingtang	0	0	275	823	275	823	429
	Xuhan	0	0	270	797	314	958	413
	Shuangxikou	0	0	42	158	42	158	88
	Panshan	0	0	79	279	79	279	137
	Datong	0	0	157	471	157	471	237
	Chaoyang	0	0	118	364	218	664	201
	Futang	0	0	284	882	284	882	431
	Zhengyuan	0	0	349	1043	349	1043	513
	Subtotal	0	0	1639	5013	1639	5013	2544
Xin'an Street	Xin'an	19	53	0	0	19	53	27
	Youyi	11	35	0	0	11	35	13
	Subtotal	30	88	0	0	30	88	40
Total		63	196	1799	5553	1862	5749	2902

### 2.3.2 Permanent Rural Collective Land Acquisition

27. The permanent land acquisition of 238.4 mu, affect 22 administrative villages, involving 134 households with 468 persons. Among that, Chun'an County, 39.4 mu of permanent land acquisition, affecting 12 administrative villages, involving 71 households with 272 persons; 199 mu of collective land is permanently acquired in Jiande City, affecting 63 households with 196 persons.
28. Survey results showed the average rate of affected arable land acquisition in 12 administrative villages in Chun'an County is only 0.03% -2.82%. In Chun'an County, the rural collective land acquired is mainly woodland and garden land, and the affected villager's income mainly comes from non-agricultural source. The situation of Jiande City is similar with Chun'an. The overall impact of land acquisition on the project is very limited.

#### 2.3.2.1 Permanently Rural Collective Land Acquisition of Chun'an Sub-project

29. The permanent Acquisition of collective land affects 12 administrative villages in 6 townships / sub-district offices, covering about 39.4 mu of collective land, affecting 71 households (272 persons). Among them, the new village of about 5.27 mu, about 3.76 mu of leaf village, Summer Hill Village of about 6.76 mu, the village gives about 3.48 mu, narrow pit village of about 8.78 mu, 6.38 mu of LianXi village, GuanChuan village, Qin village of about 4.06 mu, about 0.15 mu of sugar cane, Sichuan village of about 0.15 mu, three delta the village of about 0.15 mu, about 0.15 mu of KaoChuan village, 0.3 mu of Ping village. In the collection of collective land, 0.9 mu of arable land, woodland 19.57 mu, 18.05 garden, and other land types of 0.87 mu. For the permanent collection of collective land, see table 11. As a whole, the land acquisition of this project has limited impacts, mainly due to:

- Small area Affected and less Land Acquisition Required

- a) The permanent land acquisition required for the project is about 39.4 mu, which are consist of collective land. The average rate of acquisition of cultivable is about 0.03% - 0.82% which has a small effect on the village. Details given in the table 10.
- b) Before and after the land Acquisition, the arable land area per capita decreased by only 0.00378 mu which accounting for 99.11% while the per capita arable land reduced by 0.000378 which accounting for 99.11% of the land before land acquisition. Details given in the table 16.

**Table 14 Analysis of the Impact of Acquisition of Rural Collective Land**

City	Affected villages / communities	Number of households affected	APs	Own arable land area (Mu)	Per capita arable land area (Mu)	Total land acquisition area (Mu)	Arable land	
							The measure of area	land-loss ratio
Chun'an County	XinheVillage	15	54	406	0.27	5.27	5.27	1.30%
	Yeja Village	8	29	708	0.36	3.76	3.76	0.53%
	Pingmen Village	4	13	517	0.34	3.48	3.48	0.67%
	Zhaikeng Village	1	5	430	0.54	8.78	8.78	2.04%
	Guanchuan Village	1	5	430	0.54	4.06	4.06	0.94%
	Lianxi Village	17	72	226	0.43	6.38	6.38	2.82%
	Xiashan Village	16	63	337.85	0.42	6.76	6.76	2.0%
	Zhechuan Village	2	8	595	0.29	0.15	0.15	0.03%
	Sanzhou Village	1	3	479	0.34	0.15	0.15	0.03%
	Ping Village	4	13	211	0.29	0.3	0.3	0.14%
	Qinkeng Village	1	4	548	0.42	0.15	0.15	0.03%
	Kaochuan Village	1	3	148	0.21	0.15	0.15	0.10%

- Most of the land is forest land and garden land.

Survey shows: 49.67% (19.57 mu) of land for forest land, 45.81% (18.05 mu) of land for the garden, 2.28% (0.9 mu) of land for arable land.

- Local income is mainly based on non-agricultural Source.

The field survey shows that, Chun'an county rural drinking water safety project is to enhance overall economic condition, less per capita arable land, low agriculture output, the main source of farmers' income was non-agriculture source, most of the farmers are migrant works, so the project land has less effect on the rural residents.

In addition, spoil due to river dredging and revetment of this project is mainly piled on unused land.

**Table 15 Permanent Collective Land Acquisition of Chun'an Sub-projects**

Serial number	Component	Land acquisition (Mu)							Demographic impact	
		Arable land	woodland	Garden plot	Surface of the water	Unused land	Other	Subtotal	Household	Persons
1	Chun'an County rural drinking water safety promotion component	0.9	19.57	18.05	0	0	0.87	39.4	71	272
2	Chun'an County comprehensive management of small watershed component	0	0	0	0	0	0	0	0	0
3	Chun'an County Embankment reinforcement and river improvement	0	0	0	0	0	0	0	0	0
Proportion(%)		2.28%	49.67%	45.81%	0	0	2.21%	100%	0	0
Total		0.9	19.57	18.05	0	0	0.87	39.4	71	272

**Table 16 Land change per capita before and after acquisition**

City	Affected village	Before land acquisition		After land acquisition		Per capita arable land area change	After/Before land acquisition	
	Community	Own land (Mu)	arable area	Per capita arable land area (Mu)	Own land (Mu)			arable area
Chun'an County	Xinhe Village	406		0.2738	400.73	0.2702	-0.00355	98.70%
	Yeja Village	708		0.3607	704.24	0.3588	-0.00192	99.47%
	Pingmen illage	517		0.3399	513.52	0.3376	-0.00229	99.33%
	Zhaikeng Village	430		0.5422	421.22	0.5312	-0.01107	97.96%
	Guanchuan Village	430		0.5416	425.94	0.5364	-0.00511	99.06%
	Lianxi Village	226		0.4297	219.62	0.4175	-0.01213	97.18%
	Xiashan Village	337.85		0.4176	331.09	0.4093	-0.00836	98.00%
	Zhechuan Village	595		0.2950	594.85	0.2949	-0.00007	99.97%
	Sanzhou Village	479		0.3434	478.85	0.3433	-0.00011	99.97%
	Ping Village	211		0.2906	210.7	0.2902	-0.00041	99.86%
	Qinkeng Village	548		0.4261	547.85	0.4260	-0.00012	99.97%
	Kaochuan Village	148		0.2108	147.85	0.2106	-0.00021	99.90%

*2.3.2.2 Permanently Rural Collective Land Acquisition of Jiande Sub-project*

30. The permanent collection of collective land in the project affected 3 villages in 3 township / sub-district office, a total of about 38.54 mu of collective land collection, affecting 148 households 605 persons, including 349 women. 4 Components only Water Conservancy Facilities Renovation Project involves the permanent collection of rural collective land.
31. All land to be acquisitioned is rural collective land. The forest fire-fighting access will permanently occupy 289 mu forest land. For details, please see Table 19.

**Table 17 Permanent Rural Collective Land Acquisition of Jiande Sub-project**

Unit: mu

Project name	Township	Component	Administrative village / neighborhood committee	Farmers group	To occupy / collect collective land		The number of persons affected			
					Woodland	total	Households	persons	Female	
Municipal facilities project	Hangtoun Town	Forest road	Wulong	-	18	18	33	108	53	
		Subtotal				18	18	33	108	53
	Xinanjia Street	Forest Fire Emergency Corridor Project	Xin'anjiang community	-	155.8	155.8	19	53	27	
			Yuyi	-	25.2	25.2	11	35	13	
	Yangxi Street	Subtotal				181	181	30	88	40
		Total				199	199	63	196	93

### 2.3.3 The Impact of Temporary Land Occupation

32. This project occupies a total of 2997.84 mu land temporarily, affecting 3447 households with 12434 persons. In Chun'an County, the project occupies 1371.69 mu land temporarily with impacting total 1514 households and 6413 persons. While in Jiande City, the project occupies 1626.15 mu land temporarily with impacting total 1862 households and 5749 persons.
33. Rural Drinking Water Safety Promotion Project, Embankment Reinforcement and River Improvement Project, Comprehensive Management of Small Watershed Project, none of these involve any permanent Acquisition collective land, housing demolition, only temporary land occupation involved.
34. Design Principle: (a) Design units adhere to the principle of minimal impact on local residents in the planning process. And water plants are selected on the mountain or away from the residential areas. Therefore, it does not involve land acquisition or housing demolition. (b) To reduce the effect on temporary occupation the Pipe were laying along the roads and ditches (3) there is no permanent acquisition, even if it involves arable land that will be only temporarily occupied.

#### 2.3.3.1 The Impact of Temporary Land Occupation in Chun'an County

35. This project covers 1371.69 mu temporary land occupation, all of which are rural collective land. which includes the rural drinking water safety promotion project covers 910.31 mu temporary land occupation. And the Comprehensive management of small watershed project covers 58.4 mu temporary land occupation. Embankment reinforcement and river improvement project covers 402.98 mu temporary land occupation. The temporary occupation of collective land affected 127 towns and communities in 22 villages and towns/sub-district offices in Chun'an County. Temporary land occupation covers 1514 households (6413 persons). Details of the temporary land occupation of the project are shown in table 19.
36. The main reason is that the affected population led to the temporary land occupation:
- Network extension (721.87km), Comprehensive management of small watershed (105.3km), Embankment reinforcement and river improvement (227km), all of these are linear project with a very long distance.
  - Local farmers have less land per capita and most of them having small piece of land and the temporary land occupation had covered large population.

**Table 18 Temporary land occupation of the Chun'an Sub-project**

Entry name	Temporary land occupation (Mu)	Impacts of temporary land
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				occupation	
	State-owned land	Collective land	Subtotal	Household	Persons
Chun'an County rural drinking water safety promotion project	0	910.31	910.31	963	4189
Chun'an County comprehensive management of small watershed project	0	58.4	58.4	56	172
Chun'an County embankment reinforcement and river improvement project	0	402.98	402.98	495	2052
Total	0	1371.69	1371.69	1514	6413

### 2.3.3.2 The Impact of Temporary Land Occupation in Jiande City

37. In this project the Municipal Facilities Construction Project and Water Conservancy Facilities Renovation Project involve linear engineering with long route which occupies less temporary land, the affected farmers are relatively large in numbers but the implementation impact of the project on farmers is less. The project will temporarily acquire 166.78 mu of land in which (165 mu belongs to state land which accounting for 98.93%, 1.78 mu of collective land which accounting for 1.07% of the temporarily land acquisition). Due to temporary acquisition 28 household (857 persons) are affected. Forest fire emergency access road pavement hardening having width of 4.5 meters, land acquisition line of 10 m, so the need for temporary occupation of land has been included in the permanent land acquisition area.

### 2.3.4 Vulnerable Groups

38. This project do not affect any vulnerable groups. Through investigation and identification, this project does not involve women-headed households. Finally, through investigation and appraisal, the project does not involve encroachers or squatters on the government land, collective community land and unused forest land. Such phenomena and problems do not exist in China.

### 2.3.5 Ground Attachments

39. The ground attachments of Chun'an Sub-project include: 13 Tombs; 29.81 mu Camellia Oleifera; 253 hickory trees; 1982 Osmanthus trees. See table 22 for details.

**Table 19 Affected Ground Attachments of Chun'an Sub-project**

Impacts type	Company	Chun'an County rural drinking water safety promotion component	Chun'an County comprehensive management of small watershed component	Chun'an County Embankment reinforcement and river improvement component	Total
tomb	individual	13	0	0	13
Tea tree	Mu	29.81	0	0	29.81
Pecan	Tree	253	0	0	253
Persimmon tree	Tree	6	0	0	6
Sweet scented osmanthus tree	Tree	1982	0	0	1982

40. The ground attachments of Jiande sub-project mainly include drainage channels, scattered trees. The Project Affects Ground attachments see Table 23 for details

**Table 20 Affected Ground Attachments of Jiande Sub-Project**

Project	Unit	Amount
Drainage channels	m <sup>2</sup>	36

scattered trees	-	200
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### 3 Socioeconomic Survey of Project Area

#### 3.1 Social and Economic Backgrounds in Zhejiang Province

41. Zhejiang Province is located in the southeast coast of China, the south wing of the Yangtze River Delta. East of the largest river Qiantang River, due to the river twists and turns, called the river, also known as Zhejiang, the province to Jiang name, referred to as "Zhejiang", the provincial capital is Hangzhou.



42. It's east-west and north-south straight-line distance of about 450 km, land area of 10.18 million square km, 1.06% for the country, is one of the smallest provinces in China.

43. The province now has 11 provincial cities, under the jurisdiction of 90 counties (cities, districts), of which 22 county-level cities, 36 counties, 32 municipal districts. According to a sample survey of 5% of the population in the entire province in 2016, the total permanent resident population in the province at the end of the year was 55.9 million, an increase of 510,000 over the previous year. Among them, the male population is 28.67 million and the female population is 27.223 million, accounting for 51.3% and 48.7% of the total population respectively. The annual population of 62.4 million persons, the birth rate was 11.22 ‰; the death toll was 307,000, the mortality rate was 5.52 ‰; the natural growth rate was 5.70 ‰. The urbanization rate was 67.0%, an increase of 1.2 percentage points over the previous year.

44. Initial accounting, the annual gross regional product (GDP) of 464485 million yuan, up 7.5% over the previous year in which the added value of the primary industry was 196.6 billion yuan, the added value of the secondary industry was 2.0518 trillion yuan and the added value of the tertiary industry was 2.41 trillion yuan, up by 2.7%, 5.8% and 9.4% respectively. The contribution rate of tertiary industry to GDP growth was 62.9%. The value-added structure of the three industries was adjusted from 4.3: 45.9: 49.8 in the previous year to 4.2: 44.2: 51.6 in the previous year, with a 1.8 percentage point increase in the proportion of the tertiary industry. Per capita GDP was 83,538 yuan (converted into 12,577 U.S. dollars at the average annual exchange rate), an increase of 6.7%. Full labor productivity of 124,000 yuan / person, according to comparable prices increased 6.8% over the previous year.

#### 3.2 Social and Economic Profile of Chun'an County

45. Chun'an county is located in the western mountainous area of Hangzhou City, east of Tonglu, Jiande, South of Changshan, Qu County, southwest of Kaihua, bordering West and Anhui, Xiuning, Shexian adjacent to the north of Ling'an, the total land area of 272 thousand and 500 mu of arable land in 4427km<sup>2</sup>. Chun'an County is one of Zhejiang in the old revolutionary base areas, made contribution to the establishment of the new China extremely hard and bitter of the revolutionary era, in the period of socialist construction, in order to build the famous national key projects of the national Xin'An river reservoir power station contribution. With the reduction of natural resources, the water conservancy, agriculture, transportation and other basic conditions are backward, the economic construction is restricted and the person's living standard is improving slowly. After years of hard work, the "poor county" hat has been taken off in recent years. It is still an underdeveloped County .
46. In 2015, the County realized the gross domestic product (GDP) of 20 billion and 742 million yuan, according to the household population per capita GDP 45170 yuan. The total output value of agriculture is 4 billion 556 million yuan. The per capita disposable income of urban residents is 33432 yuan, and the per capita disposable income of rural residents is 14632 yuan. The total number of tourists is 11 million



220 thousand, and the total economic income of tourism is 10 billion 488 million yuan. At the end of 2015, the county's household population of 459 thousand and 400 persons, an increase of 400 persons over the previous year. In the household population, the agricultural population is 37.64 and the non-agricultural population is 83 thousand.

### 3.3 Social and Economic profile of Jiande City

47. Jiande City is located in the west of Zhejiang Province, the upper reaches of Qiantang River, Hangzhou - Huangshan gold tourist line in the middle, located at latitude 29 °13 ' - 29 °46', longitude 118 °54 ' - 119 °45'. East adjacent to Pujiang County, south adjacent to Lanxi City and Longyou County, Southwest adjacent to Quzhou Qujiang District intersection. Northwest adjacent to Jiande City, northeast adjacent to Tonglu County. The water system of Jiande City belongs to the Qiantang River basin, with Xin'anjiang and its tributaries Shouchangjiang and Lanjiang, Fuchunjiang 4 large rivers and 38 small and medium streams. Territory mountains and hills accounted for 88.6% of the total area of the city. Jiande City, a total area of 2321 square km, the total population of 509,200 persons, under the jurisdiction of three streets, 12 towns, a township. In 2016, the city's total population of 509,000, the regional GDP of 32.04 billion yuan, three industrial structure ratios of 9.5: 52.4: 38.1.

**Table 21 Social and economic situation of Jiande City (2016)**

Serial number	Indicator Category	Unit	Zhejiang Province	Hangzhou City	Jiande City
1	GDP	Billion yuan	42886	100053.58	320.4
2	Total fiscal revenue	Billion yuan	8549	2238.75	36.5
3	Population	Million persons	5539	901.8	50.9
4	Per capita GDP	Yuan	77644	112268	62980
5	Per capita disposable income of urban residents	Yuan	43714	48316	38102
6	Per capita disposable income of rural residents	Yuan	21125	25719	20033
7	Tertiary structure ratio	-	4.3:45.9:49.8	2.9:38.9:58.2	9.5:52.4:38.1

### 3.4 Social and Economic Situations of Affected Towns/Sub-districts of Chun'an County

48. The 5 components of the project affect 23 townships/ sub-district offices. These towns / sub-district offices accounted for two or three of the GDP industry, and the net annual income per capita was around 5000~8000 yuan, indicating that the social and economic situation is good.

49. **Wangfu Township** is located in the northwest of Chun'an County of Hangzhou City, Zhejiang Province, east of Pingmen Township, South of Songcun Township, west of Weiping Town, and west of Shexian Province in Anhui, along the river town bordering the north and Ling'an City, 60 km from the Chun'an County town of Lake area of 168 square km. Wangfu Township is Chun'an County of Hangzhou City, Zhejiang province township jurisdiction. Wangfu Township Chun'an county Party committee is the earliest location and the birthplace of the first meeting held in April 1935 Chun'an County Banqiao Village of stone temple, 1986 approved by the Hangzhou municipal government for the old revolutionary base areas. By the end of 2016, Wangfu Township a total of 18 administrative villages, the total population of 5901 persons, including non-agricultural population of 305 persons. Realize the GDP of 901 million 260 thousand yuan, of which the first output value is 625 million 630 thousand yuan, the

output value of the second industry is 173 million 550 thousand yuan, and the output value of third yuan is 85 million 970 thousand yuan.

50. **Fengshuling Town** is located in the southwest of Chun'an County, 42 km from the county, east of Dashu Town, south of Changshan County, West of Longyuan Town, to the north of Qiandao Lake. The administrative area of the town is 308 square km, covering 64 administrative villages, 188 farmers' groups, and 19 thousand persons. August 2006, the former white horse and Maple Ridge merger, set Maple Ridge town. Agriculture is based on planting food crops, and concurrently deals with trees, tea, cocoons and so on. The agricultural production around five tea, mulberry, bamboo, herbs and mountain vegetables into pieces into pieces, and the formation of massive urban agriculture pattern of five. The Chinese herbal medicine and bamboo planting area accounted for 45% and 24.8% of the county, and Chun'an County town of bamboo is medicinal materials in Zhejiang province town. In the Yellow Gardenia brand -- "Qiandao Shizhen" as Chun'an famous brand. As of 2016, the number of rural households in the whole town was 5795, and the agricultural population was 18215, of which 13066 were laborers. The total arable land area is 13525 mu, the forest area is 340757 mu, the total income of the village is 221812 yuan, and the per capita net income of farmers is 16012 yuan.
51. **Zitong Town** is located in the Northwest Lake of Qiandao Lake, about 30 km away from the county town of thousand islands, and it takes about half an hour's drive. Zitong Town as one of the nine key towns in Chun'an County, the territory of the beautiful bay source bay of Zitong Bay, a tributary of the water diving - Zitong source, there are mountains, the quaint charm of Yin Mountain, is also the Tang Dynasty emperor Chen Shuozhen and Ming Jia heroine Shangshu Hugongchen's hometown, traditional culture the profound painting tradition atmosphere, Chun'an county is the only "municipal folk painting and calligraphy". The town has 19 administrative villages, 67 natural villages, 6242 households, 19068 persons. Area of 153.6 square km, of which 10954 mu of arable land, forest 175 thousand mu. In 2016, the total income of rural economy was 2 billion 963 million yuan, the total output value of agriculture and industry was 1 billion 438 million yuan, and the per capita income of farmers was 15762 yuan, up by 107.1%, 52.9% and 79.1% respectively over 2011.
52. **Dashu Town** household population of 13929 persons, the town of GDP was 4 billion 195 million yuan, of which the first industry was 145 million 800 thousand yuan, industrial added value of 1 billion 475 million yuan, the third industry for the town of farmers per capita net income of 166 million 150 thousand yuan to 13826 yuan.
53. **Weiping Village** has a total of 15686 households, 45986 persons, of which labor has 28521 persons, 12607 persons of migrant workers. A total of 15256 mu of arable land, the town's total income of 2016 rural economy was 4 billion 99 million 400 thousand yuan, the farmers out of labor income of 102 million 180 thousand yuan, the per capita income of farmers was 13726 yuan.
54. **Zhongzhou Town** has a total of 6104 households, consisting of agricultural population about 20418 persons, the labor force 14129 persons, 6499 persons of migrant labor. There are 9038 mu of arable land in the town. In 2016, the total income of the rural economy was 1 billion 242 million 200 thousand yuan, and the income of farmers in 2016 was 71 million 970 thousand yuan, and the per capita income of farmers was 12691 yuan.
55. **Jiangjia Town** has 8163 households, 25856 agricultural population, including 17551 labor force, 10464 migrant workers. There are 12649 mu of arable land in the town. In 2016, the total income of rural economy was 2 billion 542 million 610 thousand yuan, and the per capita income of farmers was 15066 yuan.
56. **Pingmen Township** has 3807 households, the resident population of 11322 persons, consisting of 5714 men and 5608 women. The township has 4598 mu of arable land, 3473 mu of paddy fields, 1125 mu of dry land, 10491 mu of tea plantations, walnut planting area of 42829 mu, pecan yield in 2016 910 kg. In 2016, the total income of rural economy in the township was 112990 yuan, and the per capita income was 13570 yuan.

57. **Fenkou Town** has 51 administrative villages and 1 communities, with a total of 58000 persons, including non-agricultural population of 5000 persons. 18600 mu of arable land, 127000 mu of forest, the town called as the village 71, through the cable TV village 70. It is a pilot town of comprehensive reform of small towns in Zhejiang Province, and is also one of the 136 provincial central towns and 141 provincial key towns at the provincial level.

### 3.5 The Socio-Economic status of the Affected Area, Villages and Towns of the Jiande City

58. The four Components of the project will affect 3 township and sub-district office With the total population about 12 million in which women are counts about 56% of the total population. Among those, the primary industry has a unique development environment, the second and third industries accounted for a larger proportion of GDP, all play an important role in the local economy. In 2016, the per capita net income of farmers in the region was about 15127-19482 yuan, per capita net income of urban residents was reached 20960-25168 yuan. It reflects that the socioeconomic situation is good.

#### 3.5.1 Hangtoun Town

59. Hangtoun town is located in the southwest of Jiande City, named after the original resident Hangtoun village. It's east is adjacent to Shouchang town and the south at the junction of the Longyou County Zhitang and Hengshan town. It's west is adjacent to Datong town, the north at the junction of Shiping Township, Tongjia town. It's administrative area is 153 square km, under the jurisdiction of 42 administrative villages and 2 neighborhood committees, the town's total population is 3.5 million persons. Distance to the streets of Xin'anjiang only 17 km and distance to Hangzhou, 120 km. The road of Hang Xinjing Expressway, 320 State Road and 023 provincial highways run through the whole territory, flatted open area and the traffic is very convenient. Agriculture of Hangtoun town is very developed and Hangtoun town is Jiande City's grain-producing city and also is the Provincial key soil and water conservation area. The resources of the territory are very rich, there are Neolithic sites Yangshugang, which is a national scenic area "Lingqi Dongtian" location.

#### 3.5.2 Xin'anjiang Sub-district

60. **Xin'anjiang Sub-district** is located in the south of Zhejiang Xin'an River, 121 km east of Hangzhou, the regional area is 101 square km. In 2016, the population of Xin'anjiang Sub-district is 71571, the total output value is 16.23 billion yuan, up 15% over the previous year; of which, the add value of the tertiary industry is 4.63 billion yuan, up 18% over the previous year. Income of rural per capita net is 15,773 yuan, which shows an increase of 9.2% over the previous year.

#### 3.5.3 Yangxi Sub-district

61. Yangxi Sub-district is a grassroots administrative area, located in the east gate of the Jiande municipal government, in the north and south sides of Xin'anjiang, Is one of the Xin'anjiang city "eastward extension of the south, along the river development" strategy key areas. Yangxi Sub-district administrative area consist of 76.62 square km, the total population is 16995, administering 5 administrative villages, , a total of 224 hectares of arable land and 6067 hectares of woodland.

62. The socio - economic Status of the townships affected by the project is shown in Table 25.

**Table 22 Socio-economic profile of affected Sub-districts / towns (2016)**

Serial number	Project	Unit	Hangtoun Town	Yangxi Sub-district	Xin'anjiang Sub-district
1	Household population	Persons	33901	16995	71571
	Among : non-agricultural	Persons	358	1255	41695

	population				
2	GDP	Million yuan	188719	1289000	1623000
2.1	Primary industry	Million yuan	28632	7412	12690
2.2	Secondary industry	Million yuan	135136	852681	1082900
2.3	Among: industrial added value	Million yuan	8678	24646	43268
2.3	Tertiary Industry	Million yuan	24951	428907	527410
3	Total investment in fixed assets	Million yuan	7823	389562	422242
4	Industrial sales output value	Million yuan	114853	521000	374800
5	Total retail sales of social consumer goods	Million yuan	84357	614853	725481
6	Scale export volume	Million yuan	6523	58740	64200
7	Actual use of foreign capital	Ten thousand dollars	641	4221	5312
8	Local fiscal revenue	Million yuan	377	11898	13781
9	Per capita disposable income of urban residents	Yuan	21985	23789	25168
10	Per capita net income of farmers	Yuan	18138	17852	15773

### 3.6 Research Methodology and Process

63. Hohai University resettlement investigation team conducted survey from July 22, 2016, on the basis of feasibility study, investigated the project socio-economics status, Land Acquisition, affected households and units. The survey includes household population, land, impact on household's economic status and willingness to displacement. The investigation team took interviews of the affected community about the land acquisition, displacement and resettlement and also listen the views of the villager's committee. The survey team also consulted the World Bank Project in Chun'an County, Chun'an County Forestry Bureau, Land Resource Bureau, Environmental Protection Bureau, Human Resources, Social Security Bureau and other relevant departments and collected data to understand deeply the Chun'an County land acquisition and resettlement policies. In June to July 2016, the team conducted in-depth investigation and completed the resettlement program of the project on the basis of feasibility study, surveyed data and public participation and interviews.

### 3.7 Socio-economic status of Affected Villages/Neighborhood committees

64. The following villages are affected by the safe drinking water upgrading project in Chun'an County
65. **Wangfu Township: Xinhe Village.** A total of 520 households, 1550 persons, the total land area of 14706 mu, of which 406 mu of arable land, garden 917 mu, 13383 mu of woodland. The total labor force of the new village is 1110, with 422 persons working out of the year, accounting for 38.01% of the labor force. Village pure income 58 million 661 thousand and 500 yuan, per capita net income 11262 yuan.
66. **Fengshuling Town Baima waterworks: Guanchuan Village.** The village has a total of 213 HHs, with a total population of 660 persons, including 648 agricultural population. The village has a total workforce of 458 persons, including 36 industrial, 249 agricultural and third industrial labor forces 173. The total arable land of the whole village is 516 mu and the net annual income per capita of the whole village in 2016 was 13501 yuan.

67. **Fengshuling Town new Fengshuling waterworks: Zhaikeng Village** The village has a total population of 238 HHs, with a total population of 788 persons, with an agricultural and non-agricultural population 70 and 80 respectively. The village has a total workforce of 548 persons. The total cultivated area of the whole village is 430 mu, and by the end of 2016, the per capita net income of farmers in the village is 12574 yuan.
68. **Zitong Town Zitong waterworks: Lianxi Village.** The village has a total of 524 persons, 179 households, the village has an labor force of 295 persons, including migrant workers 119 persons, the village collective land 10529 mu, of which 226 mu of arable land, 452 mu of garden land, 9847 mu of woodland, 4 mu of aquaculture water. By the end of 2016, the village's per capita income was 15856 yuan.
69. **Weiping Town Yeja waterworks: Yeja Village.** The total number of households in the village of 664, 1963 persons, including 1155 labor force, the number of migrant workers 667 persons. The village arable land is 708 mu, 404 mu of garden, 11359 mu of forest land and 10 mu of aquaculture water surface, and the average income of rural economy in 2016 was 60 million 851 thousand and 300 yuan, and the per capita income of farmers was 12587 yuan.
70. **Zhongzhou Town Xiashan waterworks:Xiashan village.** A total of 240 households, 809 persons, including a total of 560 labor force, 258 migrant workers. The total area of all agricultural land in the whole village is 21132 mu, of which there are 337.85 mu of arable land, 881 mu of garden land, 19910 mu of forest land and 3 mu of cultivated water surface. In 2016, the average income of rural economy was 48858500 yuan and the per capita income of farmers was 12987.18 yuan.
71. **Pingmen Township Pingmen waterworks:Pingmen Village.** There are 456 households and 1534 persons in the whole village, among which the agricultural population is 1320. The cultivated area of the whole village is 1200 mu and the mountain forest is more than 2000 mu. Per capita income of village farmers in 2016 was 8900 yuan.
72. **Weiping Town Weiping waterworks (water pressure pump):**
73. (a) **Qinkeng Village.** There are 403 households and 1286 persons in the whole village. The whole village has cultivated area of 548 mu. Per capita income of the farmers in 2016 was 12724 Yuan.
74. (b) **Zhechuan Village.** There are 671 households and 2017 persons in the whole village. The whole village has cultivated area of 595 mu. Per capita income of the farmers in 2016 was 12691 Yuan.(c) **Sanzhou Village. The village consist of 487 households (1395 persons)** The whole village has cultivated area of 479 mu. Per capita income of the farmers in 2016 was 13727 Yuan.
75. (d) **Kaochuan Village.** There are 232 households and 702 persons in the whole village, with 442 working force labors. The whole village has cultivated area of 148 mu. Per capita income of the farmers in 2016 was 12768.(e) **Ping Village.** There are 252 households and 726 persons in the whole village. The whole village has cultivated area of 211 mu. Per capital income of the village farmer in 2016 was about 12741 Yuan.
76. Jiande City's project covers 3 village-level communities in three township / neighborhood offices. See Table 12.
77. **Qianyuan Village** have 21 farmers group, 542 households 1745 persons, which includes 802 male, agricultural population about 1745 persons, the total land area is 12033 mu (in which 1096 mu of arable land, garden 105 mu, 10715 mu of woodland). The total labor force is 1160 persons, engaged in agricultural labor force has 450 persons (which accounting for 60.62% of labor force). The total number of migrant workers of the village is 710, (61.21% of the labor force), of which there are 565 farmers' main living source is migrant works, accounting for 48.71% of the labor force. In 2016, the village of

agricultural income was 4.52 million yuan, migrant workers income was 2.17 million yuan, and net annual income per capita was 18023 yuan.

78. **Wulong village** consists of eight farmers group, 235 households 1617 persons, including 744 men. Agricultural population is 1617persons, the total land area is 12356 mu, of which 747 mu of arable land, 250 mu of garden, 11356 mu of woodland. The total labor force is 894 persons, agricultural labor force has 542 persons, (accounting for 60.62% of the labor force) and the number of migrant workers is 352 (accounting for 39.37% of the labor force), of which 314 persons' main livelihood are migrant works, accounting for 35.12% of the total labor force. In 2016, the agricultural income was 6.78 million yuan, the migrant worker's income was 9.1 million yuan, the net annual income per capita was 18027 yuan.
79. **Hangtou village** has 43 villager groups, 1358 households (3578 persons), including 1610 male. The number of agricultural population is 3578, the total land area is 13851 mu, including 1417 mu of arable land, 252 mu of garden, 11292 mu of woodland. The total number of labor force is 1788, of which there are 1355 agricultural labor force (accounting for 75.78% of the labor force), and the number of migrant workers is 433, (accounting for 24.22% of the labor force). Among that, there are 368 persons' main livelihood are migrant works, accounting for 20.58% of the total labor force. In 2016, the total agricultural income was counted about 19.9 million yuan and for migrant worker's income was 13.88 million yuan, the net annual income per capita was 18,245 yuan.
80. **Hangchuan village** has 20 villager groups, consisting of 665 households (2383 persons), which includes 1072 male. The number of agricultural population is 2383, the total land area is 22299 mu (including 2142 mu of arable land, 458 mu of garden, 19663 mu of woodland). The total number of total labor force is 2311 of which there are 1536 agricultural labor force (accounting for 67.63% of the labor force); and the number of migrant workers is 748 (accounting for 32.37% of the labor force). Among that, there are 625 persons' main livelihood are migrant works, accounting for 27.04% of the total labor force. In 2016, the total agricultural income was 20.44 million yuan and the migrant worker's income was 37.5 million yuan, the net annual income per capita was 18,191 yuan.
81. **Shimuling village** has 20 villager groups, 590 households (1765persons), including 811 males. The number of agricultural population is 1765, the total land area is 12321 mu, (including 1637 mu of arable land, 1042 mu of garden and9582 mu of woodland). The number of total labor force is 985 in which there are 470 agricultural labor force (accounting for 47.72% of the labor force) and migrant workers is 515(accounting for 52.28% of the labor force), among which, 302 persons' main livelihood are migrant works, accounting for 30.66% of the total labor force. In 2016, the total agricultural income was 8.35 million yuan and for migrant worker's income was counted about 7.56 million yuan. The net annual income per capita was 18,012 yuan.
82. **Pengjia village** has 11 villager groups, which consist of 320 households (1004 persons), including 452 males. The number of agricultural population is 1004, the total land area is 6401 mu, (including 1047 mu of arable land, 30 mu of garden, 9582 mu of woodland). The number of total labor force is 645 of which there are 320 agricultural labor force (accounting for 49.61% of the labor force) and the number of migrant workers is 325 (accounting for 50.39% of the labor force), among which, 326 persons' main livelihood are migrant works, accounting for 50.54% of the total labor force. In 2016, the total agricultural income was 6.3 million yuan and migrant worker's income was 4 million yuan. The net annual income per capita was 18,028 yuan.
83. **Juetang village** has 23 villager groups consist of 685 households (1885 persons), including 867 males. The number of agricultural population is 1885, the total land area is 11602 mu, including 2015 mu of arable land, 528 mu of garden, 18911 mu of woodland. The total number of total labor force is 905 of which there are 450 agricultural labor force (accounting for 49.72% of the labor force) The number of migrant workers is 455(accounting for 50.28% of the labor force), among which, 210 persons' main livelihood are migrant works, accounting for 23.20% of total the labor force. In 2016, the total agricultural income is 13.40 million yuan and migrant worker's income was 7.98 million yuan the net annual income per capita was 18,009 yuan.

84. **Dadiankou village** has 40 villager groups consists of 1085 households (3308 persons, including 1489 male). The number of agricultural population is 3308, the total land area is 22666 mu (including 2110 mu of arable land, 800 mu of garden, 19656 mu of woodland). The total number of total labor force is 1510 of which there are 780 agricultural labor force (accounting for 51.66% of the labor force) and the number of migrant workers is 730(accounting for 48.34% of the labor force). The number of migrant workers was counted about 590(accounting for 39.07% of the labor force). In 2016, the total agricultural income was 19.50 million yuan and the migrant worker's income was noted about 15.40 million yuan. The net annual income per capita was 18,189 yuan.
85. **Youyi village** has 7 villager groups consist of 241 households (745 persons, including 327 male). The number of agricultural population is 745, the total land area is 3267 mu (including 452 mu of arable land, 67 mu of garden, 2758 mu of woodland). The total number of total labor force is 413 of which there are 184 agricultural labor force (accounting for 44.56% of the labor force) and the number of migrant workers is 255 (accounting for 61.74% of the labor force). the number of migrant workers were counted about 216 (accounting for 52.3% of the total labor force). In 2016, the total agricultural income was 2.78 million yuan and migrant worker's income was 8.86 million yuan. The net annual income per capita was 124, 271 yuan.

**Table 23 Socioeconomic Profiles of affected villages**

Main indicators		Hangtou Town								Xin'anjiang and Yangxi Sub-district
		Qianyuan village	Wulogn village	Hangtou village	Hangchuan village	Shimuling village	Pengjia village	Juetang village	Dadiankou village	Youyi village
Population	Total number of households (households)	542	475	1358	662	580	320	685	1085	954
	Total population (person)	1745	1617	3683	2403	1730	1047	1917	3230	3240
	Among									
	Male	487	745	1694	1105	796	482	882	1485	3240
	Agricultural population (person)	1745	1617	3578	2383	1730	1004	1838	3230	0
	Non-agricultural population (person)	0	0	105	20	0	43	79	0	430
Labor force	Total labor force	1160	894	2311	1788	985	645	905	1510	2332
	Number of persons engaged in business	30	19	49	20	42	23	27	38	698
	Number of persons working in off-site	356	314	625	368	302	326	258	590	625
	Small private business	64	209	374	345	375	158	270	452	349
	Agriculture	710	352	1263	1055	266	200	410	430	660
Land Status	Arable land area (mu)	1096	747	437	1417	1637	1047	2045	2110	1237
	Rice yield (kg / mu)	620	600	650	600	600	600	600	600	580
	Garden (mu)	105	250	57	252	1042	30	528	800	268
	Dry land (mu)	210	326	210	289	237	278	369	360	7896
	Paddy field (mu)	876	537	227	1026	1256	895	1589	1752	825
Net income	Per capita net income of farmers (yuan)	18023	18027	18245	18191	18012	18028	18009	18189	15264



## 4 Socioeconomic Profile of the Affected Population

### 4.1 Chun'an County

For the purpose of understanding the basic information of the APs in the affected area, a sampling survey was conducted by the Investigation Panel of Hohai University from June to July, 2016. During the survey 103 households including 348 persons were investigated.

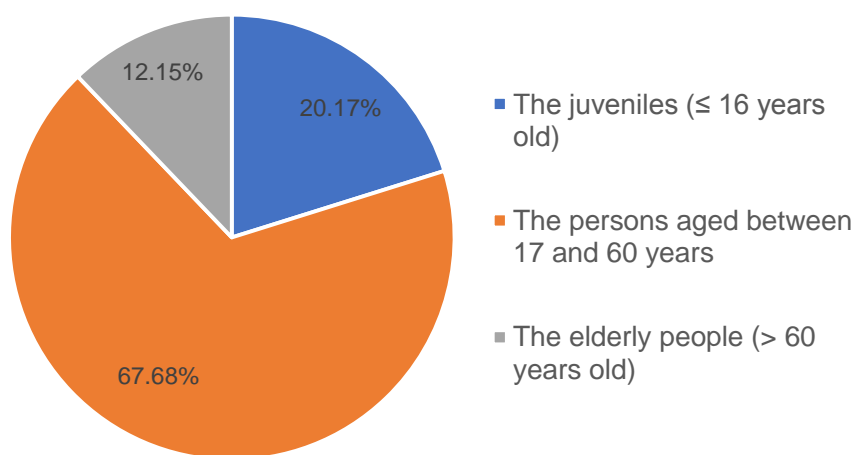
#### 4.1.1 Ethnic and gender analysis

Total 103 households including 348 persons were sampled and investigated. The average size of a family was 3.39 persons approximately. Women accounted for about 47.8% of total population. These women mainly engaged in farming, housekeeping and other service industries.

#### 4.1.2 Age distribution

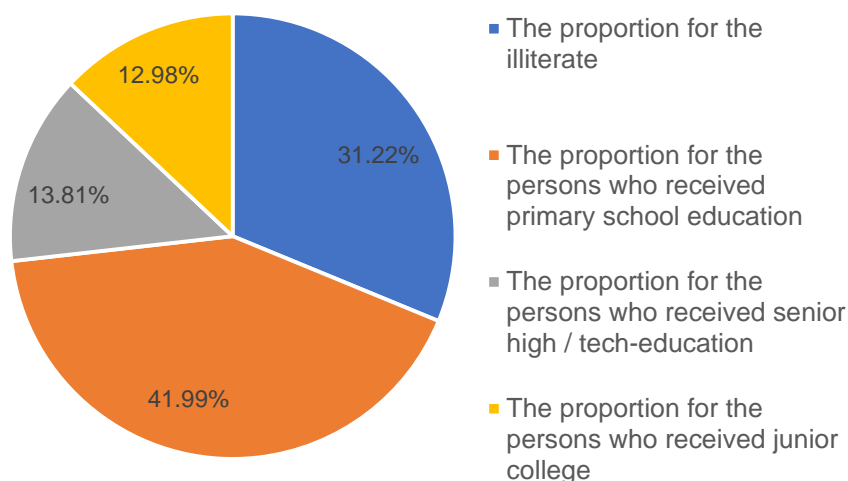
Within the total 103 households (including 348 persons), the juveniles ( $\leq 16$  years old), the persons aged between 17 and 60 years, and the elderly persons ( $> 60$  years old), accounted for 20.17%, 67.68% and 12.15% of total investigated persons respectively. Which indicates that the trend of population aging is strengthening. More details given in Fig.1.

**Figure 1 Age distribution of the sample population**



#### 4.1.3 Literacy status

Among the total 348 persons of the 103 households, 31.22% of sample populations were figured out as illiterate. While the proportions for the persons who received primary school education, senior high / tech-education, and junior college were counted as 41.99%, 13.81% and 12.98% respectively. The study reveals that most of the APs has a lower level of education. More details given in Figure 2.



**Figure 2 Literacy status distribution**

#### 4.1.4 Production condition

For the sampled 103 households including total 348 persons, the per capita area of farmland was approximately 0.42 mu, while the farmland size per household was 1.77 mu. The farmlands were mainly used to produce rice, mulberry-leaves, Chinese walnut, and vegetables. Based on the field investigation, condition for the development of high-efficiency in agriculture sector is limited because of the lower per capita land resources holding. Moreover, most of the work-force is involved in cities, which also limits the development of large greenhouses and other industries.

#### 4.1.5 Household Assets

For the sampled 103 households (that including total 348 persons), per household the number of television-sets, refrigerators, air-conditioners, phones, motorbikes (or bikes), tractors (or water suction pumps) was 2.21, 1.01, 2.67, 3.41, 1.13 and 0.91, respectively. As thus, we could indicate that the livelihood quality of these APs had not declined.

#### 4.1.6 Annual Household Income and Expenditure

According to the household investigation, annual per capita household income was 19,873.46 Yuan. It included 1,821 Yuan of agricultural-income (accounting for 9.16% of total income), 3,980 Yuan of operating forest-fruit industry (accounting for 20.03% of total income), 1,021 Yuan of wage income (accounting for 5.14%), 12,437.35 Yuan of employment income (accounting for 62.58% of total income), 521.98 Yuan of other nonagricultural-income (accounting for 2.63% of total income), and 92.13 Yuan of property income (only accounting for 0.46% of total income) .

We can find that agricultural income accounting for a very low share of household income, while employment income account for a very high proportion of household income. The APs are less dependent on land. Therefore, this project will not adopt the approach of agriculture resettlement.

##### 4.1.6.1 Annual Household Expenditure

Based on the household investigation, annual per capita household expenditure was 6,981.21 Yuan. It included 4,132.79 Yuan of operating expenditure (68.03%), 2,142.21 Yuan of living expenditure (30.69%) and, 89.21

Yuan of other expenses accounted for only 1.28% of household total expenditure, respectively. More details please see the Table 27.

**Table 24**Income of expenditure of the rural households affected by LA

Item		Average per HH (Yuan)	Per capita (Yuan)	Percent (%)
Annual household income	Agricultural income	7665.1	1821	20.45
	Forest-fruit income	16753.02	3980	14.46
	Wage income	4297.70	1021	19.26
	Employment income	52352.57	12437.35	40.71
	Other nonagricultural income	2197.17	521.98	2.53
	Property income	387.80	92.13	1.06
	Subtotal	83653.40	19873.46	100
Annual household expenditure	Operating expenditure	17396.16	4132.79	40.86
	Living expenditure	9017.21	2142.21	58.03
	Other	375.51	89.21	1.11
	Subtotal	29386.02	6981.21	100
Household net income <sup>3</sup>		66257.23	15740.67	0

#### 4.1.7 Summary

86. The investigation findings include: 1) the scale of LA and has less negative effects. Adopting the policy-tools of cash compensation and employment resettlement, can relieve the negative impacts of LA. 2) The major source of income of the effected household is employment thus the LA could hardly cause the affected household livelihoods. 3) A majority of the farmers in the project areas consider that this project is beneficial to the regional and local sustainable development. Moreover, these farmers could assist and support the project construction as long as the compensation is reasonable and timely. 4) The APs are less dependent on land. Therefore, this project will not adopt the approach of agriculture resettlement. 5) Condition for the development of high-efficiency agriculture is limited because of the lower per capita land resources. Moreover, most of the work-force is in cities, which also limits the development of large greenhouses and other industries. 6) The elderly persons are engaged in farming, to achieve the purpose of household self-sufficiency.

## 4.2 Jiande City

87. The family demographic survey including: 19 households (56 persons) in Wulong village, 1 households (3 persons) in Xin'an Jiang community, 1 household (2 persons) in Yangxi Sub-district. The total sample is 21 households and 61 persons, accounting for 33.33% of the land affected.

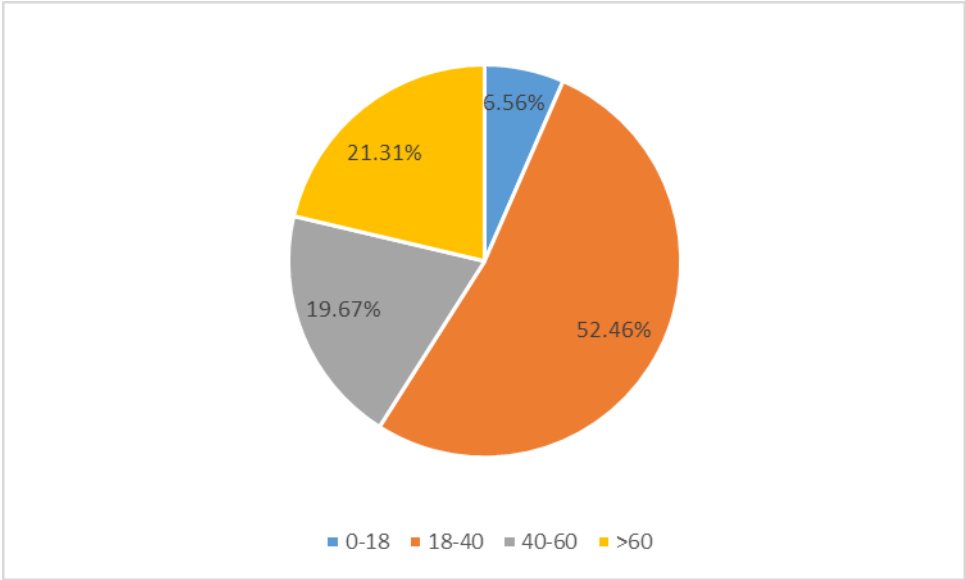
**Table 25**Sample Survey Proportion Affected Households of Land Acquisition

Village/Sub-district	Affected households of land acquisition		Number of samples		%
	Household	Persons	household	Persons	
/					
Wulong	33	108	19	56	57.58%
Xin'anjiang	19	53	1	3	5.66%
Yangxi	11	35	1	2	5.71%
/	63	196	21	61	33.33%

<sup>3</sup>Household net income =annual household income – annual household expenditure


**4.2.1 Age distribution**

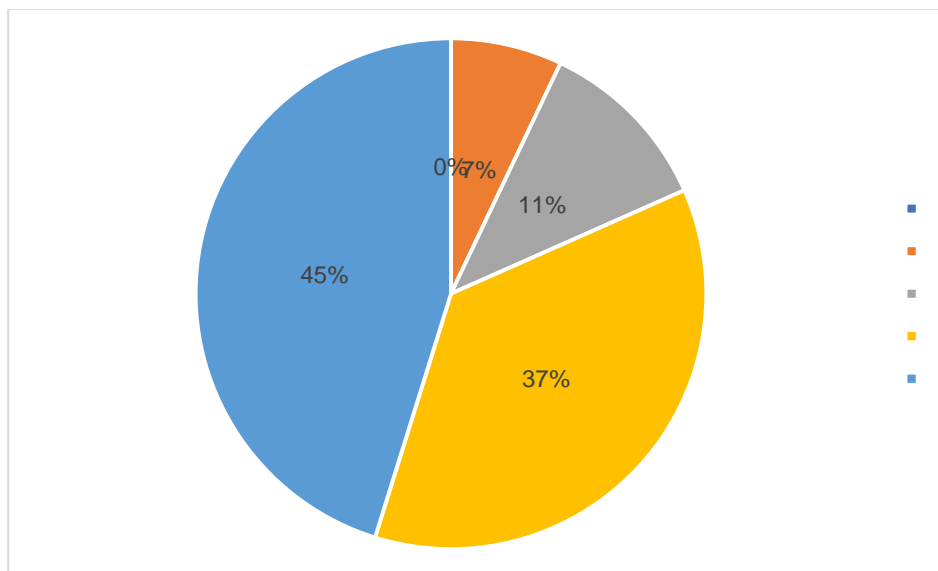
88. Within the total 21 households (including 61 persons), the juveniles ( $\leq 18$  years old), the persons aged between 18 and 40 years, the persons aged between 40 and 60 years, and the elderly persons ( $> 60$  years old), accounted for 6.56%, 52.46%, 19.67% and 21.31% of total investigated persons, respectively. More details given in Fig.3.



**Figure 3 Age distribution of the sample population**

#### 4.2.2 Literacy Status

89. Among the total 61 persons of the 21 households, total almost 0% of sample populations were illiterate. While the proportions for the persons who received primary school education, senior high / tech-education, and junior college were 4.91%, 8.2% ,54.1% and 32.79% respectively. More details given in Fig.4



**Figure 4 The Literacy Status of the sample population**

#### 4.2.3 Production Condition

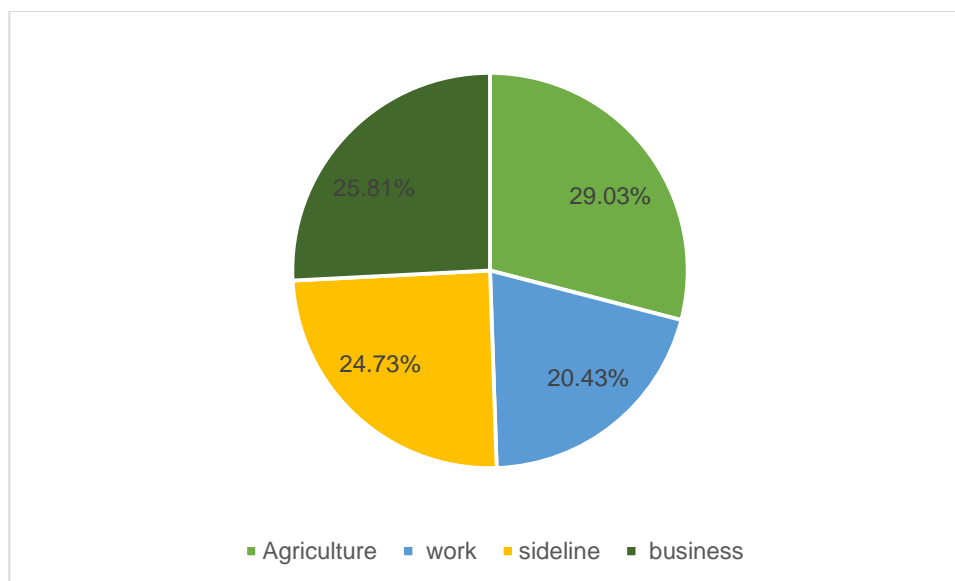
90. For the sampled 21 households including total 61 persons, the per capita area of farmland was approximately 0.61 mu. The farmlands were mainly used to produce rice, mulberry-leaves, Chinese walnut, and vegetables. Based on the field investigation, condition for the development of high-efficiency agriculture is limited because of the lower per capita land resources. Moreover, most of the work-force is in cities, which also limits the development of large greenhouses and other industries.

#### 4.2.4 Household Assets

91. For the sampled 21 households housing construction area is 6783 m<sup>2</sup>, the average housing area is 323 m<sup>2</sup> Mostly brick and concrete building.

#### 4.2.5 Labor Force Employment Structure

92. For the sampled 21 households (that including total 61 persons), there were 44 labor workers, of which 10 were employed in the enterprises, accounting for 25.81% of the total labor force; 12 persons were working outside, accounting for 20.43% of the total labor force; 16 persons engaged in sideline occupations, accounting for 24.73 % of the total labor force; 23 persons engaged in agricultural production, accounting for 29.03 % of the total labor force. More details please see the Fig.5



**Figure 5 Labor force employment structure**

#### 4.2.6 Annual Household Income and Expenditure

93. Through the survey of 21 households, 61 People's household income and expenditure statistics. According to the household investigation, annual per capita household income was 21434.1 Yuan. It included 149.54 Yuan of agricultural-income (accounting for 0.7% of total income), 6500 Yuan of wage income (accounting for 30.33%), 13511.11 Yuan of employment income (accounting for 63.04% of total income), and 1273.43 Yuan of other nonagricultural-income (accounting for 5.94% of total income).
94. In terms of expenditure, annual per capita household expenditure was 47676.1 Yuan. It included 903 Yuan of electric expenditure (18.94%), 10 Yuan of living water expenditure (0.21%), 900 Yuan of living expenditure (18.88%) and, purchase of home appliances and other expenses is 130 yuan/person, accounting for 2.73%; 242 Yuan of other expenses accounted for 5.08% of household total expenditure, respectively. More details please see the Table 29.
95. From the income and expenditure structure, Agricultural income accounting for a very low share of household income, while workers account for a very high proportion of household income. This shows that the affected population is less dependent on land. Therefore, the agricultural resettlement does not apply to this project. And this project only collects collective woodland, does not affect the farmers' income and livelihood source. So, cash compensation can solve the problem.

**Table 26 Rural Household Income and Expenditure Structure**

Project		Total (yuan)	Per capita (yuan / person)	Structure ratio
Family annual income	Wages from enterprises	702000.00	6500.00	30.33%
	Out of working income	1459200.00	13511.11	63.04%
	Agricultural income	16150.00	149.54	0.70%
	Sideline income	137530.00	1273.43	5.94%
	Total annual income	2314880.00	21434.07	100.00%
Annual household expenses	Agricultural expenditure	18910.80	175.10	3.67%
	Electricity	97524.00	903.00	18.94%
	Living water fee	1080.00	10.00	0.21%
	Communication fee	32508.00	301.00	6.31%

	The cost of going to school	21816.00	202.00	4.24%
	Medical fees	11232.00	104.00	2.18%
	Social security fee	194400.00	1800.00	37.76%
	The cost of living non-staple food	97200.00	900.00	18.88%
	Household appliances and other expenses	14040.00	30.00	2.73%
	Other	26136.00	242.00	5.08%
	Annual expenditure	514846.80	4767.10	100.00%
Savings			16666.97	/

96. To sum up, from the sample survey, the project area of social and economic development level is higher, non-agricultural industry is more developed. Most of the affected village labor force is employed in non-agricultural employment (only 21.56% of the labor force is engaged in agricultural production and is the older labor force). Although the affected villages are agricultural accounts, but the agricultural income is not their main source of income (about 0.7% of total income), land acquisition on the affected households' production and income has little effect.

## 5 Legal and Policy Framework

### 5.1 Policy framework and main clauses

#### 5.1.1 Resettlement policy of the World Bank

97. The bank's main resettlement policy World Bank operational policy OP4.12 " involuntary resettlement" and its annex (since January 1, 2002), the world bank business process BP4.12 "involuntary resettlement" and its annex (since January 1, 2002).

98. The main principles of the above policy are:

(a) Involuntary resettlement should be avoided where feasible, or minimized, exploring all viable alternative project designs.

(b) Where it is not feasible to avoid resettlement, resettlement activities should be conceived and executed as sustainable development programs, providing sufficient investment resources to enable the persons displaced by the project to share in project benefits. Displaced persons should be meaningfully consulted and should have opportunities to participate in planning and implementing resettlement programs.

(c) Displaced persons should be assisted in their efforts to improve their livelihoods and standards of living or at least to restore them, in real terms, to pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher. Resettlement policy in China

99. In this project, for the successful completion of work on LA and Resettlement the policies adopted are relevant to People's Republic of China, Zhejiang Provincial Government, Local Authorities and World Bank.

100. The resettlement implementation of this project complies with the RAP. Any policy-changes in the process of the resettlement implementation, will be approved by World Bank. More details of the policy framework given in the Table.30.

**Table 27An overview of the resettlement policy framework**

	Policies	Time in Force
National Level	Land Administration Law of the People's Republic of China	2004-8-28
	Regulations on the Implementation of the Land Administration Law of the PRC (Decree No.256 of the State Council)	1998-12-27
	Regulations Regarding on the Administration of Urban Housing Removal (Decree No.305 of the State Council)	2001-11-1
	Decisions for Further Reform and Strengthen Land Administration of State Council ( [2004] No. 28)	2004-10-21
	Guidelines on Improving Compensation and Resettlement Systems for Land Acquisition (MLR [2004] No.238)	2004-11-3
	Notice of the State Council on Strengthening Land Adjustment and Control (SC [2006] No.31)	2006-8-31
	Construction land compensation and relocation regulations for large and medium-sized water and hydropower projects (Decree No.471 of the State Council)	2006-9
	Provisional regulations on the land occupation tax of the People's Republic of China (Decree No.511 of the State Council)	
	Planning and design of land acquisition for water conservancy and hydropower projects (SL290-2009)	2009-11



	Policies	Time in Force
Zhejiang Provincial Level	Measures of Zhejiang Province for the Implementation of the Land Administration Law of the PRC	2000-6-1
	Urban Road Management Method in Zhejiang Province (Decree No.511 of the Zhejiang People's Government)	2002-10-1
	Notice on the Issues of Urban Road Occupying and Mining Fee ( ZJF [2007] No.136)	2007-6-1
	Notice on the Issuance of Rehabilitation Fee for Urban Road Excavation in Zhejiang Province ( ZJC [1993] No.410)	1993-11-1
	Methods of Land Reclamation in Zhejiang Province (Decree No.33 of the Zhejiang People's Government)	1993-6-9
	Measures for the Transfer of State-owned Land Use Rights in Cities and Towns in Zhejiang Province (Decree No.33 of the Zhejiang People's Government)	1992-3-12
	Notice of the People's Government of Zhejiang Province on the Administration of Land Occupation Tax Collection and Administration ( ZZ [2008] No.38)	2008-5-30
	Notice of the People's Government of Zhejiang Province on Adjusting the Collection Standard of Land Reclamation Fee ( ZZF [2008] No.39)	2008-6-11
	Notice of the People's Government of Zhejiang Province on Adjusting the Minimum Protection Standard of Land acquisition (ZZF [2009] No.17)	2009-1-1
	The Implementation Opinions of the People's Government of Zhejiang Province on Establishing the Social Insurance System for Urban and Rural Residents (ZZF [2009] No.62)	2010-1-1
	Methods of the People's Government of Zhejiang Province on the Compensation and Farmers Basic Livelihood Safeguard (Decree No.264 of the Zhejiang People's Government)	2010-1-1
	Regulations on the Budget of Design of Zhejiang Water Conservancy and Hydropower Projects (2010)	2010-10
Chun'an County	Measures of Improving the Social Security System of Land Acquired Farmers ( CZF [2014] No. 144)	2014-11
	Measures of the Implementation of the Compensation and Resettlement of Acquiring Collectively-owned Lands (CZF [2015] No.162)	2015-12
	Measures of the Compensation of Acquiring the Houses on Collectively-owned Lands (CZF [2015] No.163)	2015-12
	Notice of the Update Results of Basic Land Price in Chun'an County (CZF [2016] No.10)	2016-11
Jiande City	Notice of the Jiande Government on Supports of Collecting Urban Public Infrastructures (JZ [2003 No.28])	2003-9-1
	Opinions on the Further Promotion of Land Reclamation Works (JZH [2010] No.20)	2010-3-3
	Measures of Forest Right Circulation and Mortgage Administration (JZH [2013], No.58)	2013-5-13
	Notice of Adjusting the Basic Endowment Insurance Treatment Standard of Landless Farmers (JZH [2013] No.59)	2013-5-13
	Notice on the Policy of Further Clarifying the Policy of Basic Endowment Insurance of Landless farmers (JZH [2015] No.101)	2015-7-15
	Notice on Adjusting the Integrated Location-based LA Compensation Rates in Jiande City (JZH [2014] No.119)	2014-9-4
World 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

101. The Land Administration Law of the PRC is the main policy basis of the Project. The Ministry of Land and Resources and the Zhejiang Provincial Government have promulgated relevant policies and regulations accordingly. More details of the terms in these policies please see the Table.31.

**Table 28 Articles of laws and policies**

Items	Descriptions of the items	Item index
1. change in ownership	<p>In order to meet the demands of public interests, the requisition of lands owned collectively, premises owned by entities and individuals or other immovable is permitted according to the limits of statutory power and procedures.</p> <p>The requisition of collectively-owned land requires in accordance with the law, the full payment of land compensation fees, relocation subsidies, compensation for the above-ground fixtures of the land and seedlings, etc., the arrangement of social security fees for farmers affected by the land acquisition, the guarantee of their livelihood and protection of their lawful rights and interests.</p> <p>The State practices, in accordance with law, a system of compensated use of state-owned land, with the exception of land the right to the use of which is allocated by the State within the provisions of laws.</p>	<p>Property law Article 42-43</p> <p>Land administration law of the PRC, Article 2</p>
2. Construction project land processing procedure	<p>Need of occupation of state-owned land for construction for a specific construction project within the scope of land for urban construction determined in the overall planning for land utilization will be handled pursuant to the following provisions:</p> <p>(1) At the time of the construction project feasibility study, the competent department of land administration shall examine the matters relating to land use for the construction project and come up with a report on the preliminary examination of land use for the construction project; at the time of submission of the feasibility study for approval, the report on the preliminary examination of land use for the construction project produced by the competent department of land administration must be enclosed therewith.</p> <p>(2) The construction unit shall, on the strength of the relevant approval document of the construction project, file an application for land for construction with the competent department of land administration of municipal or county People's government, the competent department of land administration of the municipal or county government shall examine the same, draft a land provision plan and submit it to the municipal or county People's government for approval; where approval by People's government at the next higher level is required, it will be submitted to the People's government at the next higher level for approval.</p> <p>(3) Municipal or county People's government shall, upon approval of the land provision plan, issue a certificate of approval for land for construction for the construction unit. In the case of paid-for use of state-owned land, the competent department of land administration of municipal or county People's government shall conclude a contract on the paid-for use of state-owned land with the land user; in the case of appropriation for use of state-owned land, the competent department of land administration shall verify and issue a certificate of decision on the appropriation of state-owned land.</p> <p>(4) The land user will file an application for land registration according to law.</p>	<p>Regulation on the Implementation of the Land Administration Law of the Persons, Article 22</p>
3. Allocation of rights to use land	<p>The allocation of the right to use land shall mean the handover of a tract of land by the People's Government above the county level for use by a land user in accordance with the law for compensation, settlement, etc. or gratis.</p> <p>The right of land use obtained through allocation in accordance with this law, except those prescribed otherwise by the laws and administrative rules, has no time limit.</p>	<p>Urban real estate administration Article 23</p>
4. Resettlement compensation and basic life security	<p>Requisitioning land collectively owned by farmers, shall pay the land compensation fees and resettlement fees, compensation for ground attachments and green crops on the land and other costs (hereinafter generally referred to as the land acquisition compensation) in full in accordance with the laws, arrangement of landless farmers social security costs, protection of the landless farmers' basic life security of the legitimate rights and interests of landless farmers. When the funds for landless farmers' basic livelihood have no ability to bear 2 months of payment, the local People's governments shall adopt the methods of transferring social security risk reserve to fill up the gap, ensuring that the landless farmers' basic livelihood funds are issued timely. For acquisition of land collectively owned by farmers, farmers who will participate in the basic life security will be verified. The farmers who have not reached the age of 16 will be provided one-time land compensation fees and resettlement fees. The farmers who participate in the basic life security shall receive the basic living allowances in the month of the month after the woman turns 55 years old and the man turns 60 years old respectively. If the farmers who participate in the basic life security are still not employed after employment training, the People's government of the city or county where they are located shall have a certain living allowance.</p>	<p>Compensation for land acquisition and methods of securing the basic life of landless farmers (issued in 1.1.2010)</p>

Items	Descriptions of the items	Item index
5. Temporary occupancy and use of urban roads	<p>The construction of such facilities as various pipes and lines, and pole networks appendant to urban roads will be carried out upon approval of the competent municipal engineering administrative departments.</p> <p>The temporary occupancy and use of urban roads due to extraordinary circumstances must be approved by the competent municipal engineering administrative department and the public security and traffic administrative departments, and the roads in question may thus be occupied and used as approved.</p> <p>The temporary occupancy and use with approval shall not damage urban roads, the sites occupied and used will be promptly cleaned up and restored to the original conditions of urban roads upon the expiration of the approved occupation and use duration; if damage is made to the urban roads they will be repaired or compensation will be made therefor.</p> <p>Where it is required by construction projects to dig urban roads, the examination and approval formalities will be gone through with the competent municipal engineering administrative department and public security and traffic administration department, on the strength of the documents issued with approval of the municipal planning authorities and the relevant design documents.</p> <p>No newly-built, extended or renovated urban road, within 5 years of its completion, and no urban road to which major repairs have been made, within 3 years of the completion of the repair, may be dug up. Where it is needed to dig up due to special circumstances, it will be approved by the People's governments of cities at or above the county level.</p>	Regulations on Administration of Urban Roads Article 29, 31 and 33
6. Social endowment insurance for urban and rural residents	<p>The urban and rural residents who have the household registration of Zhejiang Province and over the age of 16 (beside full-time school students), and engage in non-state organs, public institutions, social groups without attending the basic old-age insurance can participate in the social endowment insurance. Urban-rural social endowment insurance fund will make up of individual pay cost, collective allowance and government subsidies. Residents who participate in urban and rural social endowment insurance shall pay endowment insurance by the regulation. The standard of basic pension will not less than 60 yuan per person per month. The monthly standard of personal account pension is divided by 139 per personal account. The principle of the monthly payment of the pension will be graded according to the principle of long pay. In another word, for the insured person that has made payment for no more than 5 years (including 5 years), the monthly payment of old-age pension will be calculated and issued by the standard of RMB 1/year; for the insured person that has made payment for more than 6 years and no more than 10 years (including 10 years), the monthly payment of old-age pension will be calculated and issued by the standard of RMB 2/year from the 6th year; for the insured person that has made payment for no more than 11 years (including 11 years), the monthly payment of old-age pension will be calculated and issued by the standard of RMB 3/year from the 11th year.</p>	The implementation opinions of the People's Government of Zhejiang Province on establishing the social endowment insurance system for urban and rural residents
7. temporary land occupation	<p>Where land owned by the State or by peasant collectives needs to be used temporarily for construction of projects or for geologic prospecting, the matter will be subject to approval by the land administration department of a People's government at or above the county level. However, if the land to be temporarily used is located in the area covered by city planning, the matter will be subject to agreement by the city planning administration department concerned before it is submitted for approval. The land user shall, depending on who owns the land and who has the land-use right, enter into a contract for the temporary use of the land with the land administration department concerned, or the rural collective economic organization, or the farmers committee, and pay compensation for it in accordance with the provisions of the contract.</p> <p>The temporary land user shall use the land for purposes stipulated in the contract for temporary use of the land and may not build permanent structures on it.</p> <p>Generally, the period for temporary use of land shall not exceed two years.</p>	Land administration law of the PRC, Article 57

### 5.1.2 Main differences between World Bank policies and laws of the PRC and solution

#### Compensation for resettlement of vulnerable groups

- Difference: World Bank policies require that special compensation is granted to all vulnerable groups, especially seriously affected households faced with pauperization. In Chinese compensation policies, compensation is based only on the quantity of loss.
- Solution: Special funds are available to assist the vulnerable groups, who will be identified during the detailed survey.

### Consultation and disclosure

- Difference: World Bank policies require the affected people are aware of all relevant information, and consulted with as soon as possible. Although there are measures on public announcement of land acquisition in China, the disclosure period is usually so short that the affected people cannot participate effectively.
- Solution: Consultation has begun at the early stage (before and during technical assistance). The PMO agrees to disclose the Resettlement Plan and provide the Resettlement Brochure to the affected people as required by World Bank.

### Lack of legal title

- Difference: World Bank policies require all demolished houses, whether lawful or unlawful, shall be compensated for at the same standards. According to Chinese laws, no compensation shall be provided for the acquisition of land and houses of unlawful owners.
- Solution: For World Bank financed projects, all affected people, whether lawful or unlawful, whether having ownership or right to use, will be protected before the cut-off date.

### Resettlement monitoring, evaluation and reporting

- Difference: World Bank requires internal and external resettlement monitoring. However, there is no such requirement in Chinese laws, except for reservoir projects.
- Solution: Internal and external resettlement monitoring systems have been established for all World Bank financed projects, and have been included in the Resettlement Plan.

## **5.2 Policy Principles**

102. The principles for compensation and resettlement have been developed in accordance with the regulations and policies mentioned above, with the aim of ensuring that APs obtain sufficient compensation as the role of ‘replacement price’, and negative feedbacks of the LA can be avoided. Moreover, assistance measures will be implemented to ensure that their production and livelihoods are at least restored to pre-project levels.

- Involuntary resettlement will be avoided if anywhere feasible.
- The APs will be granted compensation and basic rights that can at least maintain or even improve their livelihoods without the project supports.
- Opportunities will be provided to the APs to participate in the planning and implementation of the RAP.
- APs can obtain sufficient compensation as the role of ‘replacement price’.
- Sufficient compensation will be paid and disclosed three months prior to resettlement activities occurring.
- The borrower will be responsible for raising the cost of relocation compensation, including unexpected expenses of resettlement of this project.
- The time standard for qualification of resettlements is the date of the announcement of LA. After cut-of-date, New construction and changing land use type will not be compensated or will be considered illegal.
- If the appraised price was lower than that of the RAP, the standard will be carried out in accordance with the RAP.
- The contractor will be in charge of the land reclamation cost for land temporary utilization.
- The standard for compensation and allowance will be in accordance with the regulations and policies of national and Zhejiang Province level. The compensation investment estimate will be based on the physical survey results and the design achievements of the RAP.
- The project information and resettlement policy will be disclosed to farmers before project appraisal.

## 5.3 Resettlement policies of the project

### 5.3.1 Resettlement policies of the project in Chun'an County

#### 5.3.1.1 Acquisition of collectively-owned land and resettlement of labor-forces

103. The area of permanent LA for the project is 39.4 mu in total. Scope of the LA includes eight water supply plants namely, Wangfu, Yeja, Xiashan, Pingmen, Fengshulin, Baima, Zitong and Weiping to be constructed within total 12 counties and six towns.
104. The standards and procedures of the resettlement and compensation will be followed in accordance with the Land Administration Law of the PRC, Decisions for Further Reforms and strengthening Land Administration of State Council ([2004] No. 28), Guidelines on Improving Compensation and Resettlement Systems for Land Acquisition (MLR [2004] No.238), Measures of Zhejiang Province for the Implementation of the Land Administration Law of the PRC, The Implementation Opinions of the People's Government of Zhejiang Province on Establishing the Social Insurance System for Urban and Rural Residents (ZZF [2009] No.62), Methods of the People's Government of Zhejiang Province on the Compensation and Farmers Basic Livelihood Safeguard (Decree No.264 of the Zhejiang People's Government).
105. Methods of the People's Government of Zhejiang Province on the Compensation and Farmers Basic Livelihood Safeguards, was issued on 1<sup>st</sup> Jan, 2010. According to these methods, the age of participating in the social endowment insurance in the social endowment insurance is 16-year-old and above, the age of drawing the pension is 60-year-old for male and 55-year-old for female respectively. Because rules for the implementation of these methods have not been built in project area, this report uses the original policies of the project area.
106. In 2009, Zhejiang Province issued the Implementation Opinions of the People's Government of Zhejiang Province on Establishing the Social Insurance System for Urban and Rural Residents (ZZF [2009] No.62). These implementation rules the urban and rural residents can participate in the social endowment insurance who have the household registration of Zhejiang Province and over the age of 16 (beside full-time school students), and engaged in non-state organs, public institutions, social groups without attending the basic old-age insurance.. Residents who participate in urban and rural social endowment insurance shall pay endowment insurance by the regulation. The condition of drawing the pension is that, residents are over the age of 60 and without enjoying the benefits of government-sections, enterprise units and other social groups. Similarly, this report uses the original policies of the project area. The implementation opinions will be implemented when the project begins.
107. The implementation opinions also claim that the persons who have participated in the urban-rural social endowment insurance can participate in the basic life insurance of landless farmers as well. Correspondingly, the person who participated in the basic life insurance of landless peasant, can transfer their personal funds into the accounts of urban-rural social endowment insurance. The grant of old-age pension will be in accordance with the arrangement of urban-rural social endowment insurance.

Furthermore, the *Notice on Further Improving Endowment Insurance for Land Loss Farmers* was issued by Chun'an Government in 2014, which includes the arrangement of health care and job security for landless farmers. It figures out that the landless farmers in Chun'an County can participate in the works basic health care insurance or the urban-rural social endowment insurance. Based on the measures, the training of workers skills will be strengthened to improve the employment competitiveness of the farmers. At the same time, the farmers who have the ability and desire to apply for jobs, will accept the employment assistance

#### 5.3.1.2 Temporary land occupation

108. The area of temporary land occupation of the project is 1,371.69 mu, which is rural collectively-owned land. It includes the land occupation of rural drinking water safety promotion (910.31 mu),

comprehensive management of small watershed (58.4 mu) and of embankment reinforcement and river improvement (402.98 mu).

109. Occupying rural collectively-owned land temporarily, will be approved by the land administration department of local government. The user of rural collectively-owned land will sign a contract with farmers committee or rural collective economic organization, and the land compensation will be paid in accordance with the contract. The occupied land must not be used for building permanent constructions. When the contract expires, the land will be restored to the original state. If the land cannot be restored and cause loss, the users shall bear the corresponding responsibility for economic compensation.
110. Occupying rural collectively-owned land temporarily will be in accordance with the Land Reclamation Ordinance (Decree No.592 of the State Council), Technical Standards for Land Reclamation, Preparation Procedures for Land Development and Consolidation (TD\T1011-2000), and Planning and Design of Land Development and Consolidation project (TD\T1012-2000). Temporary use of land normally shall not exceed two years.

#### *5.3.1.3 Ground attachments*

111. All the ground attachments that affected by the project will be restored in accordance with the special requirements. Compensation for using land will be paid or incorporated into project budget. Meantime, the compensation will be paid to the property owners based on the principle of replacement price.
112. For the compensation of public facility, its compensation standard will be made in accordance with methods of market assessment and the functional restoration of public facility will be restored in the meantime.
113. Works of trees transplantation needs to be noticed six months earlier for affected farmers, especially to avoid the summer planting of Osmanthus trees. The units whose land is Acquired, the PMO can inform the acquisition information to them half a year in advance. In this way, the units can have enough time to replace ground attachments to other places. Taking the water supply plant named Fengshulin, Osmanthus trees were on the land that would be used to this water supply plant, the acquisition unit hoped that the PMO could inform the acquisition information to them in advance, and could help them find enough space for plantation of those trees.
114. The compensation for relocating graves will be paid to the AHHs, new sites for graves will be selected by the APHs with the supports of village leaders. Based on the field investigation, we found that the removal of the graves will be according to the local customs. The compensation for graves relocations shall include the fee of performing ceremonies.
115. The infrastructures, such as power facilities, which affect the daily life of APs, need to be restored in time. Some infrastructures have little impact on APs in the short term, needs to be restored in time after completion.

### **5.3.2 Resettlement Policies of the Project in Jiande City**

#### *5.3.2.1 Acquisition of collectively-owned land*

116. The standards and procedures of the resettlement compensation will be followed according to the Land Administration Law of the PRC, decisions for further Reforms and Strengthening Land Administration of State Council ([2004] No. 28), Guidelines on Improving Compensation and Resettlement Systems for Land Acquisition (MLR [2004] No.238), Measures of Zhejiang Province for the Implementation of the Land Administration Law of the PRC, The Implementation Opinions of the People's Government of Zhejiang Province on Establishing the Social Insurance System for Urban and Rural Residents (ZZF

[2009] No.62), Methods of the People's Government of Zhejiang Province on the Compensation and Farmers Basic Livelihood Safeguards (Decree No.264 of the Zhejiang People's Government), Notice of the People's Government of Zhejiang Province on Adjusting and Improving the Policy of Compensation and Resettlement of Land Acquisition (ZZF [2014] No.19) and other policies of Jiande government.

117. According to the Notice on Adjusting the Integrated Location-based LA Compensation Rates in Jiande City (JZH [2014] No.119), the land compensation of this project will be paid in accordance with the comprehensive land price issued by local governments. The comprehensive land price includes compensation for LA and resettlement. The value of compensation for LA accounts 55.6% of the value of compensation for resettlement. While, compensation for ground attachments will be paid to owners by LA units in accordance with compensation standards.

#### 5.3.2.2 *Temporary land occupation*

118. The area of temporary land occupation of the project is total 166.78 mu which includes 165 mu of State-owned land accounting for almost 98.93% of total occupation, while the rural collectively-owned land is only 1.78 mu (1.07%). The land being to occupy temporarily both the rural collectively-owned land and State-owned land will be approved by the land administration department of local government. The user of rural collectively-owned land will sign a contract with farmers committee or rural collective economic organization, and the land compensation will be paid in accordance with the contract.

119. The occupied land must not be used for building permanent constructions. When the contract expires, the land will be restored to the original state of use. in other case the user shall shoulder the responsibility for economic compensation.

120. Occupying rural collectively-owned and State-owned land temporarily will be in accordance with the Land Reclamation Ordinance (Decree No.592 of the State Council), Technical Standards for Land Reclamation, Preparation Procedures for Land Development and Consolidation (TD\T1011-2000), Planning and Design of Land Development and Consolidation project (TD\T1012-2000), Planning and design of land acquisition for water conservancy and hydropower projects (SL290-2009), and Regulations on the Budget of Design of Zhejiang Water Conservancy and Hydropower Projects (2010).Temporary use of land shall not exceed two years.

#### 5.3.2.3 *Women Rights*

121. The affected female has the same legal rights that the male has, including but not limited to land contracting, accepting education, family planning and participating in elections. Most of the investigated female labors believe that they have the same production & operation decision-making power that the male has. In other words, they have the right to choose working in a company or setting up their own business. With division of labor, the male-female employment distribution in rural families shows a typical distribution model, namely "Male for Money & Female for Family". This means that most of the male are engaged in non-agricultural industries, while most of the female are engaged in agriculture and household duties. Since the female undertake more household duties and the task of raising children, they often choose to work locally; while it's more likely for the male to go to other places for work. In terms of working hours, the female and male have basically same working hours. In terms of industries, the female has advantages in some industries such as catering industry, household service industry and wholesale & retail industry; but disadvantages in other industries such as construction industry and transportation industry. According to the survey, questions that the female are concerned about are the same as that of the male: a) whether the compensation standard is in strict compliance with national laws and policies, and whether the compensation is given in a timely manner; b) whether the land compensation funds are directly given to the APs. In terms of gender differences, the female's following

needs are different from that of the male: a) the female need training in planting, husbandry, household service and catering service; b) among most families, the male are the major force in village management. However, the female also wants to participate in village management. In addition, the contract which specifies the compensatory funds will be signed by both husband and wife. In order to protect the affected female's rights and interests, this project will invite the female to join "Supporting Group for Comprehensive Treatment of Ecological Environment of Qiandao Lake of Xin'an River". In this way, their participation right, decision-making power and development right can be guaranteed.

122. In addition, the project set a special assistance fund to offer employment positions for the vulnerable household.

#### 5.3.2.4 *Ground Attachments*

123. All the ground attachments that affected by the project will be restored in accordance with the special requirements. Compensation for using land will be paid or incorporated into project budget. Meantime, the compensation will be paid to the property owners based on the principle of replacement price.

124. For the compensation of public facility, its compensation standard will be made in accordance with methods of market assessment, and the functional restoration of public facility will be restored in the meantime. Works of tree transplants need to be noticed six months in advance for affected farmers.

#### 5.3.2.5 *Endowment Insurance of Landless Farmers*

125. Methods of the People's Government of Zhejiang Province on the Compensation and Farmers Basic Livelihood Safeguard, was issued on 1<sup>st</sup> Jan, 2010. According to these methods, the age of participating in the social endowment insurance in the social endowment insurance is 16-year-old and above, the age of drawing the pension is 60-year-old for male and 55-year-old for female.

126. According to the Notice of the People's Government of Zhejiang Province on Adjusting and Improving the Policy of Compensation and Resettlement of Land Acquisition (ZZF [2014] No.19), all local governments in Zhejiang Province shall strictly implement the Methods of the People's Government of Zhejiang Province on the Compensation and Farmers Basic Livelihood Safeguard (Decree No.264 of the Zhejiang People's Government). Meantime, after collecting the land of farmers, the rural collective economic organizations shall select and offer the land which its quality equal to the original land of landless farmers. The insured objects can be elected within the collective economic organizations. The other rural landless households will also participate in the endowment insurance.

127. The implementation opinions also claim that the persons who have participated in the urban-rural social endowment insurance can participate in the basic life insurance of landless farmers as well. Correspondingly, the persons who participate in the basic life insurance of landless farmers, can transfer their personal funds into the accounts of urban-rural social endowment insurance. The grant of old-age pension will be in accordance with the arrangement of urban-rural social endowment insurance. Specific connection approach between these two systems will be set by local governments.

128. According to the Notice on the Policy of Further Clarifying the Policy of Basic Endowment Insurance of Landless farmers (JZH [2015] No.101), the participant scope, scale and his/her qualification check as well as payment standard and procedure have been established.



## 6 Compensation Policy and Standards

129. According to the World Bank "involuntary resettlement" (OP4.12) and China's relevant policies, combined with the actual situation of Chun'an County of Zhejiang Province, we make the compensation standards for this project.

### 6.1 LA of Rural Compensation Standards

#### 6.1.1 Compensation standards of rural collective permanently LA of Chun'an

130. LA compensation is based on the World Bank "involuntary resettlement" (OP4.12), "Land Administration Law of the People's Republic of China", "Guiding opinions on improving Land Administration and Resettlement Compensation", "Land Administration Law of the People's Republic of China" implemented by Zhejiang province, "notice to update the basic data of benchmark land of Chun'an county" (Chun'an, 2016 No. 10) and Chun'an county "on the re-released notice of Chun'an county Land Administration area comprehensive price" and many other relevant policies and regulations.

131. The detailed compensation standards for the compensation of permanent LA of rural collective land in this project are shown in table 32.

**Table 29 Standards for compensation of LA of rural collective land (districts and cities)**

**Unit: 10000 Yuan / Mu**

Items	Chun'an County					
	Pingmen Villages	Fengshuling Town	Zhongzhou Town	Weiping Town	Wangfu Villages	Zitong Town
Cultivate land, Constructive land	4.0	4.4	4.0	4.4	4.0	4.4
forest land and unused forest land	1.9	1.9	1.9	1.9	1.9	1.9
Others	3.7	3.7	3.7	3.7	3.7	3.7

#### 6.1.2 Compensation standards of rural collective permanently LA of Jiande

132. The principles, standards and procedures of the resettlement compensation are according to the World Bank "involuntary resettlement" (OP4.12), Land Administration Law of the PRC, and the Notice on Adjusting the Integrated Location-based LA Compensation Rates in Jiande City (JZH [2014] No.119), with the standard of compensation for LA of rural collective land are shown in table 33.

**Table 30 Compensation standards of rural collective LA in Jiande City<sup>4</sup>**

**Unit: 10000yuan / mu**

Items	Shouchang Town	Xinjiang Sub-district Yangxi Sub-district	Datong Town Hangtuo Town
1. Rural collective land permanently acquisition	6.5		
1.1 Comprehensive compensation			
Paddy field	6.5		4.8
Forest land	2.4	2.4	2.4
Unutilized land	2.4	2.4	2.4
1.2 Ground attachments			
Paddy field	0.16	0.16	0.16
Forest land	0.32	0.32	0.32

<sup>4</sup> Note: the comprehensive compensation includes compensation for LA, resettlement subsidy. Ground attachment is not included in the comprehensive compensation.

Items	Shouchang Town	Xinjiang Sub-district Yangxi Sub-district	Datong Town Hangtuo Town
Valuable industrial crops	Actual evaluation value	Actual evaluation value	

## 6.2 Compensation Standards of Temporary Occupation of Collective Land

133. The temporary occupation of collective land will be approved by the competent authority of LA of the municipal or county People's government at the site where the land is located. The land user will sign contract with land administrative department or the rural collective economic organization and farmers committee for temporary occupation of collective land and pay compensation fees to the ownership of land.

134. Temporary land users will use land in accordance with the temporary land use contract and will not construct permanent buildings. When the contract is expired, the users are responsible for the restoration of the original use of the land; if cannot be restored, the users will pay compensation. The longest contract period is no more than 2 years. The provisional temporary land compensation standard is 1000 yuan / mu according to the policy of Zhejiang Province.

## 6.3 Compensation Standards for Affected Ground Attachments

135. Compensation standards for affected ground attachments are carried out in accordance with the principle of replacement.

136. The detail of compensation standards for affected ground attachment is given in table 34.

137. The affected infrastructures and ground attachments will be compensated in accordance with the principle of replacement price. More details given in Table 35.

**Table 31 Compensation standards for affected ground attachments of Chun'an**

Affected items	Unite	Compensation standard(Yuan/Unite)				
		Extremely Large	Large	Middle	Small	Seedling
Hickory	Zhu	1800	1440	1080	360	18
Persimmon tree	Zhu	130	104	65	19.5	5
Sweet Scented osmanthus tree	Zhu	338	208	143	78	6.5
Mulberry(piece)	Mu	4000				
Bamboo	Zhu	5.2				
Tea plantation(area)	Mu	Average, 4000-6000, Good quality, 6000-10000				
Oil tea garden	Mu	2000-4000				
Oil tea garden(odd)	Cm	10				
380V pole	Zhu	1800				
Grave	Ge	1800				
Nursery garden	Zhu	10000				

**Table 32 Compensation standards of affected infrastructures and ground attachments of Jiande**

Items	Unit	Standard(Yuan/Unit)
Drainage Channel	m <sup>2</sup>	60
Scatter trees		200

## **6.4 Compensation Cut-off Date**

The cut-off day was set up as the day of July 22, 2016, agreed upon by the World Bank task team, engaged provincial agencies and municipal agencies. The World Bank sent its task team as project pre-identification mission to visit the project areas and had discussions in line to the application to the World Bank involuntary resettlement policy OP 4.12 in February and June 2016. The World Bank task team, engaged provincial and municipal agencies reached agreements to the project components and the project areas, specific to the affected project areas and starting day of the resettlement census survey. From February to June 2016, the information of the cut-off day and the resettlement census survey were disseminated to all villagers through municipal, township agencies and village committees. The broad resettlement information disclosure received broad supports from villagers when the resettlement census survey team interviewed to each affected family to identify the potential negative impacts toward to them since July 22, 2016. This census survey, combined by municipal, township agencies and village committees, was the milestone that the project preparation was started and the negative impacts will be accounted to be compensated based on the World Bank and National requirement.

**Table 33 Taxes and Fees of the Project**

No.	Item	Rates	Basis	Receiver
1	Farmland occupation tax	35 yuan/m <sup>2</sup>	Notice of the Zhejiang People's government on the administration of land occupation tax collection and operation (ZZF [2008] No. 38)	Jiande Bureau of Finance
2	Land restoration fees	40 yuan/m <sup>2</sup>	Notice on increasing the standard for the land restoration fees (ZCN [2013] No. 298)	Jiande Bureau of Finance
3	Land rehabilitation fees	It depends some factors, such as the type of land before damage, the actual damage area and the extent of land damage, etc.	Methods of Land Restoration in Zhejiang Province (Decree No.33 of the Zhejiang People's Government), Notice on reviewing land administration fees (CN [1991] No.195), Land restoration ordinance (Decree No.256 of the State Council)	
4	land paying-usage fees	20 yuan/m <sup>2</sup>	Notice of the use of administrative measures for the land paying usage fees (CZZ [1999] No. 117), Notice on adjustment of usage fees for new construction land (CZ [2002] No. 93), Notice of the collection of Land paying-usage fees (ZCZ [2003] No. 83), Notice of further improving the administrative measures for the land paying usage fees (CZ [2004] No. 85), Notice of adjusting the policies for usage fees of new construction land (CZZ [2006] No. 48), Notice on the issue of fiscal and tax policy regarding the linked to the increase or decrease for land use in urban and rural areas (CZ [2014] No. 7)	
5	New vegetable land development and construction fund	20000 yuan/mu	Zhejiang vegetable base construction protection ordinance, Notice on the sale policy of grains, vegetables, meat and cotton (CZ [1994] No. 3)	
6	Investigation and design research fees	1% of total LA fees	/	/
7	Administration feed	2% of total LA fees	/	/
8	Training fees	1% of total LA fees	/	/
9	Unexpected expenses	10% of total LA fees	/	/

## 7 Recovery Plan for Resettlement Production and Life

138. Make reasonable compensation for the APs and ensure their livelihoods recovery or exceed the original level. According to the actual living standard of the project area, the national economic and social development plan of the county (District, city), the purposes of the resettlement are as follows:

139. (1) To ensure self-sufficiency in food generally. Try to adjust the agricultural structure and improve land productivity in the areas with less arable land resources.

140. (2) To ensure the per capita net income of APs restored to the pre-resettlement level.

141. (3) Improve public infrastructures, schools, medical treatment, social welfare, natural environment and traffic conditions.

142. All forced APs will be covered as part of the project construction and will be provided with adequate funding, making APs beneficial from the project as much as possible. The temporary occupation of the rural collective economic will be compensated, including farming production restoring costs and compensation for APs, as funding for livelihood restoration.

143.

144. We do encourage the APs participation in preparation and implementation process, make every efforts in transparency, transformation of information, consultation and giving respect to the APs wishes, which will be helpful in restoration of APs livelihoods and better living standards.

### 7.1 Compensation for Permanent Land Acquisition

#### 7.1.1 Permanent LA compensation for rural collective land of Chun'an County

145. The compensation standard for permanent LA is varies from district to district. 39.4 Mu land of 12 affected villages is acquired and the compensation fee is 1.11138 million yuan (28.2 thousand yuan per mu). Compensation is one-time payment to the farmers. Details are shown in table 37.

**Table 34 Analysis of compensation for permanent collective LA**

City/Cou nty	Affected County /Town	Affected Village	LA area(Mu)				Household( HH)	Perso ns (perso n)	Compensation Standard(10000yuan/Mu)			Compensati on Fee(10000y uan)
			Gard en field	Woodla nd	Cultiv ate Land	Oth er			Arable land /constructi on land compensat ion standard	Woodland/un used land compensation standard	Oth er land	
Chun'an County	Wangfu County	Xinhe village	5.27	0	0	0	15	54	4.0	1.9	3.7	19.499
	Weiping Town	Yeji Village	3.76	0	0	0	8	29	4.4	1.9	3.7	13.912
		Zhechuan village	0	0	0.15	0	2	8	4.4	1.9	3.7	0.66
		Sanzhou Village	0	0	0.15	0	1	3	4.4	1.9	3.7	0.66
		PingVillage	0	0	0.3	0	4	13	4.4	1.9	3.7	1.32

City/County	Affected County/Town	Affected Village	LA area(Mu)				Household(HH)	Persons (person)	Compensation Standard(10000yuan/Mu)			Compensation Fee(10000yuan)
			Garden field	Woodland	Cultivate Land	Other			Arable land /construction land compensation standard	Woodland/unused land compensation standard	Other land	
		QinkengVillage	0	0	0.15	0	1	4	4.4	1.9	3.7	0.66
		Kaochuan Village	0	0	0.15	0	1	3	4.4	1.9	3.7	0.66
	Zhongzhou Town	XiashanVillage	5.54	0.67	0	0.55	16	63	4.0	1.9	3.7	23.806
	Pingmen County	Pingmen Village	3.48	0	0	0	4	13	4.0	1.9	3.7	12.876
	Febgshuling Town	Zhaikeng Village	0	8.78	0	0	1	5	4.4	1.9	3.7	16.682
		Guanzhou Village	0	4.06	0	0	1	5	4.4	1.9	3.7	7.714
	Zitong Town	Lianxi Village	0	6.06	0	0.32	17	72	4.4	1.9	3.7	12.689

146. According to the " Notice of Adjusting the Calculation Methods of the Basic Living Security of the Land-loss Farmers of Chun'an County" (issued by the [[2016]136] Chun'an County), "If not involves the arable land, the persons who participate in Basic Living Security is calculated according to the number of the land acquisition area and the corresponding AP amount. Namely, the county unified according to 16 mu/ person calculation resettlement population." Because the LA of the project is mainly forest land, which has not reached the standard of 16 mu/person, so this project will not involves Basic Living Security.

147. Due to the diversification of the development of each village and the different impact of project on villages, the relocation and income restoration plan is made in accordance with the willingness of APs. After the investigation of social economy and the affected village and representatives of resettlement persons, we make different resettlement and income recovery plan, namely the combination of cash compensation and employment for resettlement restoration. Cash compensation is that every APs is willing to accept and can receive. After obtaining cash compensation, the land Acquired households may be compensated by means of off-farm relocation (including employment, training, migrant working, running small businesses, etc.).

#### 148. Plan One: Cash compensation

149. This project offers cash compensation for affected villages and affected farmers, according to "notice on the adjustment of basic life safeguard of Chun'an county LA APs" (issued by the [[2016]136] Chun'an County)", this project offers cash compensation. In the compensation process, the fees for compensation and relocation are paid directly to affected farmers, including young seeds and ground attachments compensation. After receiving cash compensation, affected farmers can start both agricultural development and non-agricultural for livelihood restoration.

150. Rural safe drinking water projects need to build water plants and install pipelines, resulting in loss of farmer's land. Because Zhejiang is a developed province, the local farmers mainly rely on out-migrant work and the second or third industry-based income. The per capita income is exceeding over the other provinces in rest of the China. In Chun'an County, much arable land left unused due to a large population

of migrant workers. While the project will cause part farmers lossing their land, the affected farmers are less dependent on their land and can transfer the land to neighbor without asking for rent. So, the impact of LA on farmers is tiny.

**151. Plan two: Non-agricultural**

152. Non-agricultural is mainly divided into employment guidance, employment opportunities from the project and skills training.

153. **(1) Employment Guidance.**The township government provides employment services for agricultural surplus labor by organizing the employment meeting specially for affected farmers; providing them detailed information regarding related industries, providing legal advisory assistance and knowledge to assist affected farmers for non-agricultural employment.

**154. (2) Employment opportunities and arrangements offered by the project.**

155. According to estimates, the project will produce 8613 temporary jobs every year, including 1861 technical positions and 6752 non- technical positions during the implementing period, and will provide 212 permanent jobs, including 50 technical positions and 162 non-technical positions during the maintenance period. During the implementing period, jobs such as phase transformation in Miscanthus deforestation, plantation of new species will give priority to landless farmers, during the maintenance period, the permanent employment post will also give priority to landless farmers to promote former’s employment.

156. **(3) Skills Training.** In order to help the land-loss farmers employed flexibly or startup businesses independently after receiving training, a skills training program has been developed for them., this project plans to train 750 persons.

- 1) Training objects: The training object must have registered permanent residence of Chun’an County, affected due to the Land loss, who are over 18 years of age and educated labors, related skills training certificate will be issued by the Chun’an County Personnel Bureau of labor and social security.
- 2) Training contents: For agriculture training, efficient seed production and vegetables cultivation training will be given in accordance with the relocation plan. For non-agricultural training, chefs, waiters, and technical training, etc. are provided in accordance with social and economic development needs of Chun’an County.
- At the same time, Out-migrant workers will be trained in common sense of urban life, protection of rights and interests, safety in production, prevention and reduction of natural disasters, and national employment policies.
- 3) Organization arrangements. The training activities will be carried out by the Bureau of labor and social security of Chun’an county and township.

157. The allocation of LA compensation fee (land compensation fee and resettlement subsidies fee) for each sub project-affected village is shown in table 38.

**Table 35 Ways of LA compensation fee**

Component	Usage of payment method
Payment method	LA compensation fee pays directly to APs
Payee	Lan Bureau of Chun’an County

### 7.1.2 Permanent collective land impact and recovery plan of Jiande City

158. The 4 components of the project collectively collected about 199 mu of collective land, affecting 63 households with 196 persons.

159. The allocation of compensation for LA (land compensation and resettlement allowance) of the affected villages is shown in table 39.

**Table 36 Usage of LA Compensation fee**

Component Name	Usage of LA Compensation fee
Forest road	LA Compensation fee and Relocation fee fully paid to APs
New and restored ecological weir	LA Compensation fee and Relocation fee fully paid to APs
Ecological reconstruction of dyke	LA Compensation fee and Relocation fee fully paid to APs
Drainage ditch of new forest area	LA Compensation fee and Relocation fee fully paid to APs
Forest fire emergency passage project	LA Compensation fee and Relocation fee fully paid to APs

160. Based on the above resettlement intention, after extensive consultation with the affected village and the APs representative during social and economic investigations, different resettlement and income recovery schemes are identified. The specific means of resettlement and restoration measures are as follows:

#### 7.1.2.3 Cash compensation and Distribution

161. This project will provide cash compensation for land acquisition by affected villages and affected farmers, according to the Notice on Adjusting the Integrated Location-based LA Compensation Rates in Jiande City (JZH [2014] No.119), the impacts of the village by land project in LA compensation rates is shown in Chapter 5.

162. The land compensation fee will be paid directly to the landless farmers. Young and ground attachments compensation are paid directly to the LA farmers.

163. In this project, only collective woodland is acquired, the livelihood of the farmers is not affected. The LA farmers can be engaged in agricultural and non-agricultural activities after receiving the compensation money.

164. This project compensation funds will be paid through the bank card account rather than cash. The payments need three signatures from couples who receive the money and the village leaders. The benefit of the three signatures is to avoid the risk of withholding or embezzling of compensation funds on the one hand. On the other hand, it can ensure awareness of women on compensation funds.

## 7.2 Women's Rights and Interests Protection

165. The sub projects will take a series of measures to ensure that women's rights and interests are guaranteed during the preparation and implementation of the project. Mainly as follows:

166. (1) Affected women will receive information relating to LA and must ensure participation in LA and public consultation. The compensation agreement must be signed by both husband and wife.

167. (2) In technical training, priority is given to the affected women's labor to ensure that their economic status is not compromised.



168. (3) To ensure that a certain number of women (at least 20% of unskilled labor) have access to non-skilled jobs during the project construction process. In addition, women will receive the same pay equally as men since they work the same way
169. (4) During the operation of the project, priority will be given to catering, temporary employment and other positions to women affected by the project, to ensure that their income is restored.

### **7.3 Affected Infrastructure and Ground Attachments**

170. The affected infrastructure and ground attachments will be compensated as well as restored after the project by the property right unit.
171. The restoration measures of demolished facilities must be planned in advance. In the actual operation, the project will minimize the adverse impact on the persons nearby, to ensure the safe, efficient, timely and accurately restoration.
172. According to the survey, 13 graves need to be relocated. After consultations between villagers and townships, they have reached an agreement that the graves should be moved to the cemetery of this village. According to the survey, the distance between the cemetery and the residential area is 0.5-1km.

### **7.4 Temporary Land Restoration**

#### **7.4.1 Restoration Principles**

173. After consultation with the AHs and village collectives under the supervision of the owner, and land and sources bureau. The principles for restoration are as follows:
- 174.1. The AHs will have priority, so that not only the APs will obtain job opportunities to increase household income, but also the quality of land restoration will be ensured. If the AHs or the village collective are/is unwilling to restore the temporarily occupied land itself, such land will be reclaimed by the IA.
- 175.2. Strict measures will be taken during construction to protect surface soil and avoid any irrecoverable impact. During excavation, surface soil (recommended thickness 30-50cm) will be collected and stored separately, and measures taken to prevent water loss and soil erosion. After construction, subsurface soil will be backfilled first, then surface soil will be spread on the surface evenly, and the ground leveled to reduce the impact on the quality of cultivated land. Land that hardens during construction will be plowed immediately after construction to restore the loose state.
176. In general, the temporary occupation of collective construction land and state-owned land will not result in any property loss. The construction agency will restore the occupied land timely, and costs so incurred will be included in the budget of the Project.
177. The temporarily occupied collective cultivated land and woodland will be restored by the construction agency, and compensation will be paid to the affected proprietors.

#### **7.4.2 Restoration Measures**

178. 1) Technical Standards
179. Temporary land restoration technical standards is made based on the "standard of land restoration technology (Trial)". the relevant provisions: flood control standard is higher than the current land standard, the slope of the ground is generally not more than 5°, the drainage facilities meet the site

requirements, the soil blocks will set drainage canal to meet the drainage requirements for paddy field, for drainage requirements, setting irrigation channels, the traffic in the restoration area is set according to the traffic requirement, pavement elevation will above the elevation of 30cm ~ 50cm.

#### 180. 2) Restoration Measures

- The debris on the surface of soil will be removed for rehabilitation of land farming layer,
- After the completion of temporary land usage, it will be restored to its basic level,
- After completion of arable land restoration, its quality will be the same as previous.
- Finally, construction of irrigation, drainage channels and agricultural traffic network will be done.

## 8 Institutional Arrangement and Implementation Schedule

### 8.1 Institutional Arrangement

181. To ensure the implementation of the project, the World Bank loan work leading group is established in Zhejiang province. Water conservancy and Hydropower Investigation and Design Institute completed preliminary research work and environmental assessment and the RAP is conducted by Hohai University. At the same time, each project from city and county level also establish the PMO, which is responsible for the preparation of the resettlement program of each sub project, LA, implementation management and internal monitoring etc. The collection and resettlement of rural collective land will be coordinated by the Land Resource Bureau of the Chun'an County and will be handled by the township land authorities. Project resettlement organizations and responsibilities are shown in table 40 and Table 41.

**Table 37 Resettlement institutional arrangement in Chun'an County**

Responsibility	Organization	County	Personnel
Full consideration	Land Bureau of Chun'an	LA office	
Implementation	All levels of government and Land Bureau	Wangfu Village	Cheng Honglai
		Weiping Town	Zhang Weibin
		Zhongzhou Town	Jiang Xiangyong
		Pingmen village	Wang Daoping
		Fengyeling Town	Yu Qingping
		Zitong Town	Xiao Jinping

**Table 38 Resettlement institutional arrangement in Jiande City**

Number	Organization	Personnel	Tel.
1	Jiande City National Development and Reform Commission	Liu Yin	13735838528
3	Jiande City Agriculture Bureau	Qian Jianjun	13506811788
4	Shouchang Town Government	Xu Xiping	13306537661
5	Hangtou Town Government	Zheng Guangming	13777895640
6	Datong Town Government	Wu Xinjian	13429691389
7	Forestry centre	Shao Weizhong	13805704501

182. In the implementation of the World Bank loan in Zhejiang Qiandao Lake, the Xin'An river basin water resources and ecological environment protection project in Zhejiang Province, the following institutions are grouped. They are responsible for the city project resettlement activities, planning, management, implementation and monitoring.

- Zhejiang World Bank loan leading group
- Jiande World Bank loan leading group
- World Bank Loan Project Management Office
- Project implementation unit
- Government functional departments
- Project Design Unit

- National Research Centre for Resettlement, Hohai University

183. The World Bank loan in Zhejiang province leading group and Jiande Sub-Project Leading Group is responsible for the leadership and coordination of the project and also responsible for selecting the program for making the resettlement of the project.

184. Jiande city World Bank Project Management Office (located in Jiande city development and Reform Commission)

- Coordination with the relocation and resettlement advisory bodies for the preparation of the program.
- Responsible for coordination between the consulting company and other organizations during the preparation of the project.
- Coordinate the progress of the implementation of the project and the RAP;
- Report the resettlement funds plan and urge the payment of funds
- Coordination with the related agencies of the resettlement work;
- Responsible for raising funds for project resettlement
- Responsible for the allocation of resettlement funds
- Responsible for the resettlement of the project
- Responsible for tracking and supervising the allocation of resettlement funds for the project
- Dealing with complaints of APs during the resettlement process
- Responsible for coordinating the work of external monitoring institutions for resettlement;
- The collection and arrangement of various materials required for the internal monitoring reports of the project
- Responsible for the management of the resettlement files of the project

#### **185. The Jiande Municipal Land Resources Bureau**

- Coordination with the relevant departments to formulate policies for resettlement programs;
- Overall responsibility for LA (including assisting to handle social insurance for landless farmers);
- Participate in the investigation of the impact of the project resettlement
- Supervise the implementation of resettlement activities

#### **186. The Shouchang Town/ Hangtou Town/ Datong Town/ Xinanjiang Sub-district / Yang Xi Sub-district People's Government**

- Participation in physical quantity surveys;
- Participation in calculating the compensation funds of the affected households
- Participating in the payment of compensation funds for the APs;
- Participation in the complaints of APs during the settlement process
- Participation in the training of the employment skills of the APs;
- Responsible for the implementation of the employment measures for the APs;

#### **187. The project design agency**

- To reduce the impacts of Engineering resettlement through optimization design
- Determine the scope of land acquisition and removal

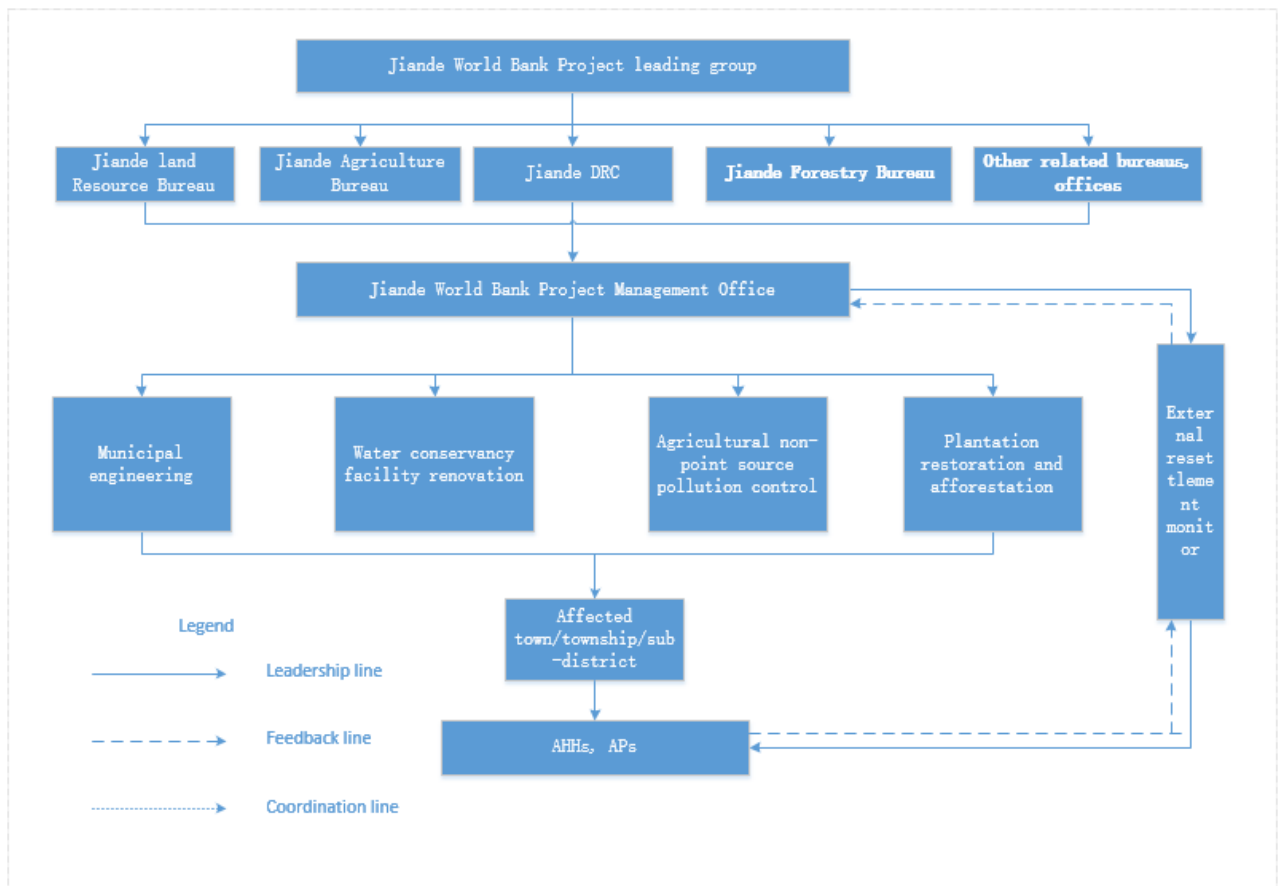
#### **188. Independent External Monitoring and Assessment Mechanism.**

189. In the process of RAP preparation, the implementation of the external monitoring, independent external monitoring and assessment agencies are responsible for the resettlement work, provision of resettlement progress report and supervision report to the Jiande PMO, Zhejiang Province PMO and World Bank. .

Zhejiang Province PMO will employ monitoring agencies as resettlement external monitoring and assessment unit. The main responsibility is:

- (1) as the monitoring and evaluation of the independent organization in the RAP to start after the observation of the RAP and implementation of all aspects of the monitoring and evaluation of the relocation and resettlement work and the implementation effect and the social adaptability of APs, and through the Jiande PMO to provide assessment report monitoring resettlement to WB.
- (2) Provision of technical advice to the Jiande PMO on data survey and resettlement activities.

190. To ensure the smooth implementation of RAP, to strengthen the communication with the Zhejiang province PMO, resettlement enforcement agencies and the World Bank timely and effectively. The sub PMO also arranged a full-time staff that is responsible for implementation, coordination and organization. These personnel are well-experienced in LA.



**Figure 6 World Bank Loan project (Jiande) Organization Structure**

## 8.2 Implementation schedule

191. According to the schedule, the projects are expected to be completed in four years from 2018 to 2023. The main resettlement work is expected to start from 2018 and finish up to 2020.

192. The basic principles of scheduling are as follows:

- (1) LA, relocation and resettlement will be completed at least 1 month before the construction of the project, so as to enable the APs to have sufficient time to prepare the production and recovery plan;
- (2) In the process of resettlement, the APs will have the opportunity to participate in the project activities. The scope of LA areas will be announced before construction and the publicity manual for resettlement will be issued and prepared for public participation;
- (3) All kinds of compensation fees will be fully paid directly to the ownership of property 3 months ahead of approving of LA compensation and resettlement programs. Any units and individuals will not use the compensation fee on behalf of APs. The compensation fee will be fully paid with no exception.

193. According to the progress of the preparation and implementation of LA and resettlement, the overall schedule for resettlement of sub projects will be worked out. The actual implementation time may be adjusted due to deviations from the overall progress of the project. Detailed implementation time and contents are shown in table 42.

**Table 39 Component LA and relocation Timetable**

Stage	Task Name	Chun'an City
Preparation	Determination of LA and resettlement	Aug. 2017
	Physical investigation of LA and removal	Spet. 2017
	Preliminary survey of social economy	Oct.2017
	Consultation on resettlement programs	Aug. 2017
	Preparing RAP	Aug.to Oct.2017
	Releasing RAP	Oct. 2017
	RAP approved	Oct. 2017
Implementation	Collection of rural collective land related approval procedures	Mar. 2018
	Hold the mobilization meeting of LA and removal, and announce the policy	Mar. 2018
	Announcement of LA	Mar. 2018
	Negotiate and sign an agreement for compensation and placement	Mar. 2018
	facility relocation	Mar. to Jun. 2018
	Construction land delivery	Jun. 2018
M&E		Dec. 2017 ~Aug. 2020

## 9 Resettlement Cost and Disbursement

### 9.1 Budget

194. The total budget includes permanent LA costs, compensation fees for affected infrastructure and ground attachments, related taxes and fees, management fees, etc. The total resettlement budget for the project is 7.76674 million Yuan.

195. Among them, the construction of small watershed projects, LA compensation is 0.2336 million Yuan; embankment reinforcement and river regulation construction LA compensation is 1.61192 million Yuan; rural drinking water construction projects LA compensation is 5.92122 million Yuan. The budget for each project is shown in table 24. The total cost of the migration will be included in the cost of the whole project.

**Table 40 Project resettlement compensation and resettlement budget of Chun'an**

**Unit: 10000 yuan**

number	Items	Small watershed management sub project	embankment reinforcement and river regulation construction	rural drinking water construction projects	Total
1	Permanent LA of collective land	0	0	111.138	111.138
2	infrastructure and ground attachments	0	0	116.86	116.86
3	Temporary land compensation and land restoration fee	23.36	161.192	364.124	548.676
subtotal(1-3)		23.36	161.192	592.122	776.674

196. The total resettlement budget for Jiande project will be 10.5051 million Yuan, and the total cost of resettlement will be included in the cost of the whole project. The permanent collective land acquisition cost is 4.776 million Yuan, accounting for 45.46% of the total expenses, crop compensation will be 62700, Yuan, accounting for 0.60% of total costs. See table 44.

**Table 41: budget of relocation project of Jiande**

**Unit: 10000 Yuan**

Number	Catalogue	Municipal facilities construction project			Water conservancy facilities reconstruction project			Total		
		Standard	quantity	fee	standard	quantity	fee	quantity	fee	%
1	Permanent LA of collective land	10000yuan/mu								
	Wood Land	2.4	199	477.6	2.4	0	0	199	477.6	45.46%
	Subtotal	2.4	199	477.6		0	0	199	477.6	45.46%
2	Temporary Land									
2.1	Unused land in rural areas		0	0		0		0	0	0.00%%
2.2	State-owned unused land		5	0				5	0	0.00%
	Subtotal			0				0	0	0.00%
2.3	Young crops compensation			0				0	0	
2.3.1	Paddy Land	0.16	7.29	1.1664	0.16	15.1	2.42	22.39	3.5864	0.34%
2.3.2	Wood Land	0.32	0.9	0.288	0.32	7.5	2.4	8.4	2.688	0.26%
2.3.3	Others		3.5	0		0	0	3.5	0	0.00%
	Subtotal		11.69	1.4544		22.6	4.82	34.29	6.2744	0.60%
3	Infrastructure and ground attachments			0				0	0	0.00%
3.1	Drainage channels	0.006	36	0.216				36	0.216	0.02%
3.2	Scattered Trees	0.015	200	3				200	3	0.29%
	Subtotal		236	3.216	0	0	0	236	3.216	0.31%
	Subtotal(1-3)		446.69	482.2704		0	0	469.29	482.2704	45.91%
4	Survey and design research fee	1% of the total direct cost of LA		4.776			0		4.776	0.45%
5	Implementation	2% of the total direct cost of		9.552			0		9.552	0.91%



Number	Catalogue	Municipal facilities construction project			Water conservancy facilities reconstruction project			Total		
		Standard	quantity	fee	standard	quantity	fee	quantity	fee	%
	management fee	LA								
6	Technical training fee	1% of the total direct cost of LA		4.776			0		4.776	0.45%
	Subtotal(1-7)			501.3744			0		501.3744	47.73%
7	Unforeseen expenses	10% of the total direct cost of LA		47.76			0		47.76	4.55%
	Total			1050.5088			0		1050.5088	100.00%

## 9.2 Annual investment plan

197. According to the LA progress of each sub project, the annual fund utilization plan is Prepared, which is shown in table 45.

**Table 42 Interim Implementation Schedule**

**Unit: 10000Yuan**

Project	2018	2019	2020	Total
APs relocation fee	310.6696	271.8359	194.1685	776.674
percentage	40%	35%	25%	100%

198. According to the LA progress of each sub project, the annual fund utilization plan is Prepared, as shown in table 33.

**Table 43 Interim Implementation Schedule**

Year	2018	2019	2020	Total
Investment(10000 Yuan)	439.16	379.74	231.61	1050.51
percentage	41.8%	36.19%	22.01%	100%

## 9.3 Sources of fund

199. According to the project schedule, the source of funds come from financial subsidies, bank loans, self-financing, business loans. Among which, resettlement funds come from government finance and self-financing.

## 9.4 Appropriation and Management of Funds

### 9.4.1 Resettlement funding

200. Resettlement project is self-financed and a commercial bank loan in part by the PMO or the owners is paid to the land bureau. Financial funds will be paid to the PMO. Compensation policies and standards in the implementation process will be in accordance with the RAP. The LA compensation fee will be paid to the affected units or individuals. The flow chart of funds appropriation is shown in figure 7.

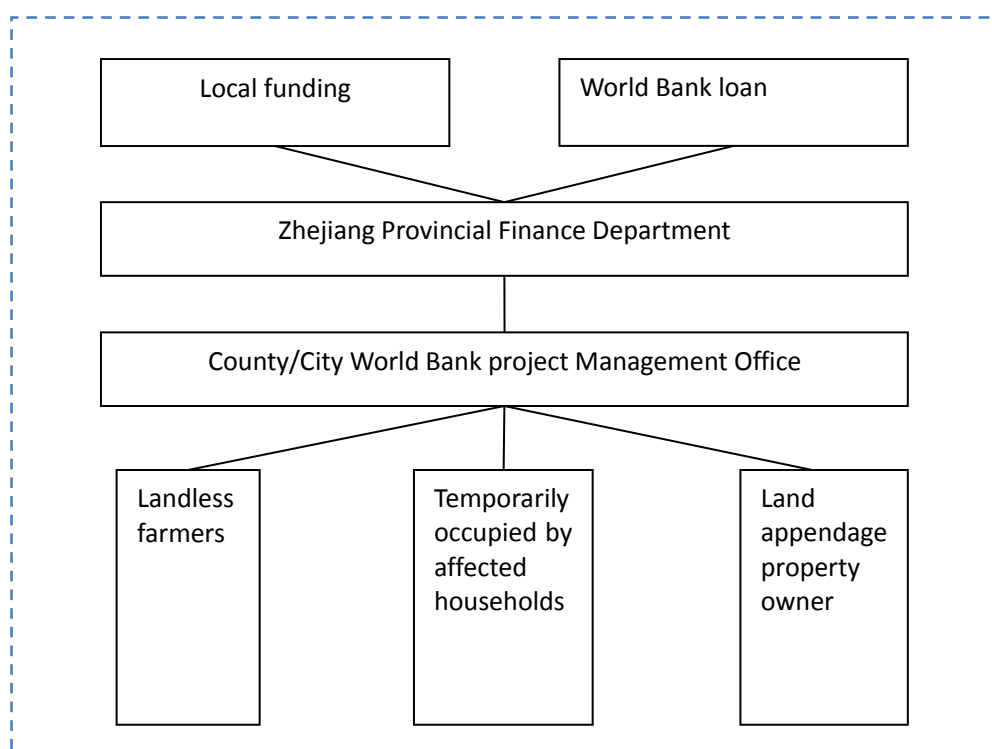


Figure 7 Flow Chart of Resettlement fund

### 9.4.2 Resettlement fund management

201. To ensure that the funds for resettlement can be allocated in time and in full order, and that the production, living and income levels of affected farmers are restored, the following measures will be taken:

- All and resettlement related expenses will be included in the total project budget, resettlement compensation fees and other expenses will be paid to the county PMO of the relevant units and individuals through the implementation mechanism;
- To ensure the smooth implementation of LA, PMO must establish financial and regulatory agencies at all levels, to ensure that all funds disbursed on time.

## **10 Public Participation and Grievance Redress Mechanism**

202. During the update period of the RAP, the public participation process shall include at least the following activities:

- Consultation with APs during the census and detailed survey is conducted to ensure that they understand the project indicators and their rights, and that they have the opportunity to make comments.
- A public consultation meeting open to all APs to announce the Cut-off Date for the project and to determine its geographical scope.
- A public consultation meeting with all APs to disclose qualifications, rights, complaints, complaints procedures, monitoring matters, and discuss other issues related to changes and other concerns of the affected and other stakeholders.
- The public consultation shall discuss the replacement cost principle and the valuation of the affected property as well as the results thereof, and negotiate the contract individually and deal with individual concerns.
- Negotiate the terms of the contract with the affected party individually.
- A public consultation meeting with all APs discloses the latest LA plan and announces the date, place and time of payment of the agreed property transfer price and other compensation or rights.
- The consultation and participation records in the process of the documentation (meeting minutes, list of participants, photos).
- Easy accessible and understandable information disclosure manners, such as RIB, bulletin board.

### **10.1 Public Participation**

#### **10.1.1 Chun'An county public participation**

##### *10.1.1.1 Public Opinion Survey*

203. During the implementation of this project, the public will be encouraged to participate actively in the following procedures and methods:

204. Resettlement representatives will participate in land acquisition and resettlement work

205. Representatives of farmers are elected by the affected villages, and deputies cooperate with the relevant departments to solicit opinions and demands from APs, listen to rationalization proposals, and communicate regularly. Give answers to questions raised by them and give serious consideration to their opinions and suggestions. In the process of land acquisition survey, land acquisition compensation standard determination, compensation and resettlement negotiations, representatives will participate in the above work process, in order to fully reflect the interests and opinions of resettlement, and ensure the fair, reasonable and transparent of resettlement work.

206. (2) Negotiated determination of land acquisition and resettlement.

207. Through public participation in the work, let the APs and the government to negotiate and communicate, so that the APs put forward reasonable suggestions.

208. (3) Holding consultative meetings
209. The Forum on the participation of the APs and women representatives (including the proportion of female representatives will be more than 30%) will be convened. The contents of the project will be introduced, their opinions and suggestions will be heard, and their suggestions and opinions will be recorded in time, and the consideration and attention will be given to them.
210. (4) Holding participation meetings
211. Before land acquisition, we will extensively and deeply explain the policies, regulations, compensation standards and RAPs to APs, so that APs know and arrange early. The purpose is to combine the local actual situation and the opinions and suggestions of APs, and strictly implement the project in accordance with the World Bank policy and national policy.
212. Using multi-media tools to disclose resettlement policy.
213. Through television, newspapers and radio and other widely carried out the relevant land acquisition and resettlement policy, as far as possible to let the APs understand information. On the other hand, a booklet is sent to the affected person, and detailed consultation can be carried out on the spot.
214. Release notice.
215. Notice the main contents: the project brief overview, land acquisition and resettlement policies (including the scope of compensation and resettlement standards) responsible for the organization, housing migration schedule and the APs rights and obligations, complaints and complaints, monitoring and evaluation etc..
216. (7) RAP for public
217. The RAP will be announced on the bank after passing the examination, let the APs and non-governmental organizations to consult, at the same time, the copies are sent to the affected villages and relevant units of the office or the reference room, persons can access. The address of the PMO will publish a notice in the local newspaper, and explain the RAP check location.
218. (8) RIB
219. RIB. The main part of the RAP is written as a RIB, and the manual must be sent to the resettlement before the project is implemented. The main contents of the RIB are: project overview, project impact, compensation policy, implementation agencies, complaint channels, etc. By reading the Resettlement Information Booklet, resettlement can understand the whole content of the project, and put forward reasonable suggestions to the PMO for the problems of the project.
220. From July 22, 2016, the PPMOs and PMOs with the Hohai University organized a survey of public opinion in the affected areas.
221. A total of 7 townships (towns) of 12 villages were investigated in this survey, with a total of 103 valid samples. Most respondents believe that this project is meaningful in the improvement of living environment and is conducive to physical and mental health, most persons think that the legitimate rights and interests are violated shall appeal, and the vast majority of persons required to protect the legitimate rights and interests, guarantee the land demolition work transparent, fair and impartial. The survey results of public will be shown in table 27.

**Table 44 Public opinion survey statistics**

Questions	Answers	Results				
		1	2	3	4	5

Questions	Answers	Results				
		1	2	3	4	5
Types of affected respondents	①House Demolition ②Land acquisition ③House Demolition/ land acquisition	0	100%	0	0	0
Are you familiar with the construction of this project?	①Clear② not clear③ unclear	39%	53%	8%	0	0
Are you in favor of the construction of the project?	① Favor ② Disapproval ③ I don't know	57%	33%	10%	0	0
In your opinion, the possible benefits of project construction are (allowing multiple choices)	① Improve the living environment, ②improve the operating environment, ③solve drinking water problems, ④increase employment opportunities and income ⑤others	56%	5%	39%	14%	0
In your opinion, the possible disadvantage of the project construction is (allowing multiple choices)	①Life is affected; ②work or production is affected; ③the relationship between man and land is more intense; ④income is reduced; ⑤others	37%	21%	53%	22%	0
Do you understand the current compensation policy in our county?	①Clear② not clear③ unclear	11%	62%	27%	0	0
What are your views and suggestions on the project construction?	①Reduce the amount of demolition ② reduce the amount of land acquisition ③employ local labor force ④ use local raw materials ⑤others	57%	42%	72%	59%	0
What are your requirements for land compensation and placement fees? (affected by the land acquisition)	① All allocated to affected households, self-employed ②Land compensation fees remain in the village collective, the allocation of subsidies to the affected households, and participate in the social security of landless farmers ③ All the collectives shall master the funds and adjust the land within the village ④ The resettlement allowance will be granted to the affected families, and the land compensation fees will be paid to the collective development enterprises, and the land adjustment shall not be made⑤others	52%	0	0	39%	0
After the land acquisition, are you willing to take part in the social security of the landless farmers?	①Yes ②No	94%	6%	0	0	0
If you want to, and you need to pay part of the cost of protection, you are willing to pay the cost is:	①Less 5000yuan ②5001-10000yuan ③10001-20000yuan ④above2000yuan	44%	39%	17%	0	0
If not, the main reason is that... :	①The cost of my own investment is too high②The level of protection is too low③After a long time to enjoy④ others	17%	0	8%	0	0

10.1.1.2 Public Participation at the Implementation Stage

222. With the progress of project preparation and implementation, the implementing agency will conduct further public participation. See table 48.

**Table 45 Public Participation Plan**

Purpose	Mode	Time	Agencies	Participants	Topics
Safeguard the rights and interests of resettlement	Villager council	September 2017	Affected villages	Affected farmers	Following the principle of voluntariness, 3-5 representatives were elected to form the institutions for the protection of the rights and interests of resettlement, including women and the elderly
Land acquisition announcement	Village bulletin board and Villager council	October 2017	Chun'an PMO, the design agency, Land Bureau, Township and village cadres	Affected farmers	Announcement land acquisition area, compensation standard and resettlement way, etc.
The impact of resettlement review	Field investigation	February 2018	Chun'an PMO the design agency, Land Bureau, Township and village cadres	Affected farmers	1) confirm the final impact quantity 2) list of occupied land and loss assets of resettlement 3) prepare the basic contract of compensation agreement
Public land compensation and RAP	Village bulletin board and Villager council	December 2017	Chun'an PMO, the design agency, Land Bureau, Township and village cadres The farmers support the project team; the bank responsible for the funding	Affected farmers	Compensation fees and payment methods; issuing information manuals; introducing the contents of the project; starting time; compensation standards and so on
The complaint procedures	Villager council	December 2017	County PMO; Land Bureau; township government; village committee	Affected farmers	Introduction of complaint and complaint procedure
Determine the income recovery plan and its implementation	Villager council(many times)	Before implementation	Chun'an PMO, the design agency, Land Bureau, Township and village cadres	Affected farmers	Discuss the final income recovery scheme and compensation fund use plan
Training program	Villager council	November 2017 ~ May 2018	Implementing agency, the Bureau of labor insurance, the township and village cadres	Affected farmers	Discussing training needs
Monitor	Villager council	February 2018 ~2019 February	resettlement external monitoring institutions, township and village cadres	Affected farmers	1) the progress and impacts of resettlement 2) payment of compensation 3) information disclosure 4) recovery of production

Purpose	Mode	Time	Agencies	Participants	Topics
					and living, relocation of housing restoration

## 10.1.2 Jiande City Public Participation

### 10.1.2.1 Public Opinion Survey

223. In order to safeguard the legitimate rights and interests of residents affected by the project, reduce complaints and dispute, and achieve the proper resettlement target, good policies and implementation details of land acquisition, the RAP is well prepared and organizational work is well implemented according to relevant resettlement policies and regulations made by Zhejiang Province and the affected counties. The whole project will attach great importance to resettlement participation and consultation and listening to their opinions in resettlement policy formulation, planning and implementation stages.

224. During the implementation of this project, the public will be encouraged to participate actively in the following procedures and methods:

- Resettlement representatives will participate in land acquisition and resettlement work.

Representatives of farmers are elected by the affected villages and deputies cooperate with the relevant departments to solicit opinions and demands from APs, listen to rationalization proposals, and communicate regularly. Give answers to questions raised by them and give serious consideration to their opinions and suggestions. In the process of land acquisition survey, land acquisition compensation standard determination, compensation and resettlement negotiations, representatives will participate in the above work process, in order to fully reflect the interests and opinions of resettlement and ensure the fair, reasonable and transparent of resettlement work.

- Negotiated determination of land acquisition and resettlement.

Through public participation in the work, let the APs and the government to negotiate and communicate, so that the APs can put forward reasonable suggestions.

- Holding consultative meetings

The Forum on the participation of the APs and women representatives (including the proportion of female representatives will be more than 30%) will be convened. The contents of the project will be introduced, their opinions and suggestions will be heard and their suggestions and opinions will be recorded in time and the consideration and attention will be given to them.

- Holding participation meetings

Before land acquisition, we will extensively and deeply explain the policies, regulations, compensation standards and RAPs to APs, so that APs know and arrange early. The purpose is to combine the local actual situation and the opinions and suggestions of APs and strictly implement the project in accordance with the World Bank policy and national policy.

Using media tools to publicize and report the demolition policy. Through television, newspapers and radio and other widely carried out the relevant land acquisition and resettlement policy, as far as possible to let the APs understand information. On the other hand, a booklet is sent to the affected person and detailed consultation can be carried out on the spot.

- Release Notice



Notice the main contents: the project brief overview, land acquisition and resettlement policies (including the scope of compensation and resettlement standards) responsible for the organization, housing migration schedule and the APs rights and obligations, complaints monitoring and evaluation etc.

➤ RAP Disclosure

The RAP will be posted on WB’s website after RAP appraisal. Meanwhile, the RAP will be disclosed in all affected villages and relevant units. PMOs will advertising the RAP disclosure time and accessible manners in the local newspaper and explain the RAP check location.

➤ Resettlement Information Booklet

The main part of the RAP is written as a RIB, and the booklets will be distributed to the APs before the project is implemented. The main contents of the RIB are: project overview, project impact, compensation policy, implementation agencies, complaint channels etc. By reading the Resettlement Information Booklet, APs can understand the whole content of the project, and put forward reasonable suggestions to the PMO for the problems of the project.

225. From July 22, 2016, the PMO persons, the affected town/county with the Hohai University organized a survey of public opinion in the affected areas.

226. A total of 5 townships (towns) were investigated in this survey, with a total of 28 valid samples. Most respondents believe that this project is beneficial in the improvement of living environment and is conducive to physical and mental health, most persons think that the legitimate rights and interests are violated shall appeal, and the vast majority of persons required to protect the legitimate rights and interests, guarantee the land demolition work transparent, fair and impartial. The survey results of public will are shown in table 49.

**Table 46 Public Comments and Suggestions Results**

No.	Questions	Answers	Results				
			-1	-2	-3	-4	-5
1	Do you know the project will be built?	(1) know (2) don't know (3) don't make sure	25	2	1		
2	The information sources about the project and Land acquisition and resettlement	(1) newspapers (2) meetings (3) Neighbors (4) social investigators	1	1	2	24	
3	Do you approve of the project?	(1) approve (2) disapprove (3) don't matter	28				
4	Do you think that Who will benefit from construction of the project (multiple choices)	The country (1) yes (2) no	28				
		The collective (1) yes (2) no	28				
		The individual (1) yes (2) no	28	2			
5	Do you think that what are the benefits of this project to you?	(1) Safeguarding life and property (2) Improving travel conditions (3) Increasing economic income (4) Improving investment environment (5) others	1	26	3	27	
6	Do you think that what are adverse effects of this project on you?	(1) Having no adverse effects (2) Bringing traffic inconvenience (3) Economic losses caused by the housing demolition, (4) Economic losses caused by the Land acquisition (5) others	23	1			
7	Do you know policies related to the land compensation and resettlement?	(1) understand (2) understand something (3) don't understand	20	2	2		

No.	Questions	Answers	Results				
			-1	-2	-3	-4	-5
8	Do you know how to complain, when your legitimate rights and interests are violated in the process of LA demolition?	(1) understand (2) don't understand	27	1			
9	What do you choose in wishes of the land compensation?	(1) Cash compensation, without land (2) The adjustment of land, compensation belongs to the collective (3) Others (please make a list)	24				
10	If you would only receive cash compensation without adjustment of agricultural land, what is going on after acquiring the compensating?	(1) Engaged in the secondary or the tertiary industry (2) Migrant workers (3) Developing family economy according to adjusting the industrial structure, or using the remaining land (4) The purchase of insurance (5) Others (please state)	20	1	1	2	
11	(Land Acquired HH) What kind of help do you want after LA?	(1) Technical training (2) Given employment information (3) Others (please state)	24	4			

#### 10.1.2.2 Public Participation at the Implementation Stage

227. In order to deal with the problems and requirements of the affected households in a timely manner, it is necessary to consult with the APs so that all problems can be resolved before the plan is implemented. The implementing agencies will arrange reasonable public participation so that each affected person has the opportunity to consult on the compensation agreement before signing a compensation agreement with the resettlement agency. Public participation, process planning and policy disclosure of APs are shown in tables 50 and 51.

**Table 47 Public participation process and participation plan**

Public participation process					
Town / Sub-district	Time	Site	Participant	Content	Remarks
	September 2017	Affected villages	the APs, 123 persons	In accordance with the principle of voluntariness, 3-5 representatives of farmers are selected to form the institutions to protect the rights and interests of resettlement, including women and the elderly.	Safeguard the rights and interests of migrants
Hangtoug Town	2017.2	Hangtoug Town	Hohai University, The secretary and director of the affected village 45 persons	Socio-economic survey of resettlement, the survey of scope and physical volume affected by the project	The project impact in socio-economic survey
	2017.2-2017.4	QianYuan village, WuLong village, ShiMuLing village, PengJia village, JueTang village, DaDiankou village 钰塘	Land acquisition and removal office, 8 villages APs, 52 persons	1) Social and economic investigation of resettlement, investigation of project impacts scope and physical quantity investigation; 2) Compensation and resettlement policy and resettlement scheme; 3) determine the income recovery plan and its	Preliminary consultation on compensation policy in the form of farmers' meetings; The final income recovery scheme and the use scheme of compensation funds are discussed through the way of holding farmers'

Public participation process					
Town / Sub-district	Time	Site	Participant	Content	Remarks
				implementation	meetings; Farmers' participation in the establishment of income recovery plan
	2017.4	Hangtoun Town	APs, village secretary, 49 persons	1) confirm the final impact quantity 2) the assets of the occupied land and losses, 3) prepare the basic contract of compensation agreement	Farmers participate in monitoring and evaluation
Yang Xi Sub-district forest reform	2017.2	YouYi village, YangXi village, XinAnJiang county	Jiande PMO, YangXi Sub-district, Forestry centre, APs	Compensation fees and payment methods	
	2017.3	YouYi village, YangXi village, XinAnJiang county	YangXi Sub-district, APs	1) confirm the final impact quantity 2) the assets of the occupied land and losses, 3) prepare the basic contract of compensation agreement	
	2017.6	YouYi village, YangXi village, XinAnJiang county	YangXi Sub-district, APs	Discuss the final income recovery plan and the plan of the use of compensation funds	
	2017.6	YouYi village, YangXi village	YangXi Sub-district, APs	Discuss the training needs and make plans	
participation plan					
Town / Sub-district	Time	Site	Participant	Content	Remarks
	September 2017	Affected villages	the APs	In accordance with the principle of voluntariness, 3-5 representatives of farmers are selected to form the institutions to protect the rights and interests of resettlement, including women and the elderly.	Safeguard the rights and interests of migrants
	2017.2	Hangtoun Town	Hohai University, The secretary and director of the affected village	Socio-economic survey of resettlement, the survey of scope and physical volume affected by the project	The project impact in socio-economic survey
Hangtoun Town	2017.2-2017.4	QianYuan village, WuLong village, ShiMuVillage, ShiMuLing village, PengJia village, JueTang village, DaDiankou village 钰塘	Land acquisition and removal office, 8 villages APs	1) Social and economic investigation of resettlement, investigation of project impacts scope and physical quantity investigation; 2) Compensation and resettlement policy and resettlement scheme; 3) determine the income recovery plan and its implementation	Preliminary consultation on compensation policy in the form of farmers' meetings; The final income recovery scheme and the use scheme of compensation funds are discussed through the way of holding farmers' meetings;

Public participation process					
Town / Sub-district	Time	Site	Participant	Content	Remarks
					Farmers' participation in the establishment of income recovery plan
	2017.4	Hangtou Town	APs, village secretary	1) confirm the final impact quantity 2) the assets of the occupied land and losses, 3) prepare the basic contract of compensation agreement	Farmers participate in monitoring and evaluation
	2017.4	Hangtou Town	Monitoring and evaluation agency	1) implementation schedule and effect; (2) compensation payment; 3) information release; 4) livelihood restoration	
Yang Xi Sub-district forest reform	2017.2	YouYi village, YangXi village, XinAnJiang county	Jiande PMO, YangXi Sub-district, Forestry centre, APs	Compensation fees and payment methods	
	2017.3	YouYi village, YangXi village, XinAnJiang county	YangXi Sub-district, APs	1) confirm the final impact quantity 2) the assets of the occupied land and losses, 3) prepare the basic contract of compensation agreement	
	2017.6	YouYi village, YangXi village, XinAnJiang county	YangXi Sub-district, APs	Discuss the final income recovery plan and the plan of the use of compensation funds	
	2017.6	YouYi village, YangXi village	YangXi Sub-district, APs	Discuss the training needs and make plans	

**Table 48 Project Information Disclosure Process**

Document	The way of using language and public way	Open date	The public place
With the introduction of the involved in this project	In Chinese, the county/City government website	After reviewed by the bank	the affected county/town/ village
Project requisition of the general introduction of information	In Chinese, the county/City government website	After reviewed by the bank	the affected county/town/ village
The city land acquisition compensation policy	In Chinese, the county/City government website	After reviewed by the bank	the affected county/town/ village
The public RAP	In Chinese	After reviewed by the bank	the affected county/town/ village
RIB	In Chinese, to extend into the hands of the resettlement	After reviewed by the bank	the affected county/town/ village
Report of RAP	In Chinese and English	After reviewed by the bank	the affected county/town/ village

## 10.2 Impact Assessment

### 10.2.1 Chun'an Impact Assessment

228. In the design and preparation stage of the project, the public participation has received good results:

#### 229. YeJia water plant and supporting pipe network project

230. Background: The original proposed site is located in the Anchuan village. During the construction, the original water supply facilities of the village will be affected which will bring difficulties for local peoples' drinking water supply.

#### 231. Participation Process

232. After the design plan, has been determined, the requisition of land will be publicized and the disputes will be reflected within the prescribed time limit.

233. Government agencies hold meetings of the APs, informing the participants of the government's policy and compensation standards for resettlement compensation. And negotiate with the affected person about the resettlement compensation scheme and the cost.

234. The results of the meeting: The Chun'an farmers do not agree with the original design plan, asked the government to determine alternative Chun'an plant location.

235. According to the geological conditions and technical feasibility conditions, Wei Ping town government and village secretary Chun'an consultations again and determine the new site. The new site is located in the YeJia village, and the water can also supply to the Chun'an village.

236. Participation results:

- Avoid social conflicts caused by site selection.
- Fully respect the views of the farmers and obtain their recognition and support, which is conducive to the development of the project.
- The formation of a transparent and fair treatment scheme for land acquisition events can be extended to the use of other events.



**Figure 8 new site of YeJia water plant**

## 10.2.2 Jiande Impact Assessment

237. In the design and preparation stage of the project, public participation has received good results:

238. Comprehensive renovation project of Wulong River in head town

239. Background: the ecological transformation of the weir is about 12.2 km, built 12 new mountain reservoirs, plowing road and field channels, new forest drainage ditch about 10.3 km.

### 240. Participation Process:

- The PMO and the Hohai University and Jiande City Land Bureau to discuss the project covers the scope of construction, and ultimately determine the ecological reconstruction of the weir is about 12.2 km, built 12 new mountain reservoirs, plowing road and field channels, new forest drainage ditch about 10.3 km.
- The town government held a meeting with the affected households to inform the participants of the government's policy and compensation standards for resettlement compensation. Negotiate settlement compensation scheme and expenses. In accordance with the principle of respect, fully listen to the views of participants.
- Interviews with affected households, so as to fully understand their wishes and listen to their suggestions

241. Participation results:

- To avoid social conflicts caused by wetland site selection.
- To fully respecting the affected households of wetland construction and gaining their recognition and support
- A transparent and fair treatment scheme for land acquisition is formed, which can be extended to other events.



**Figure 9**The social investigation Forum



**Figure 10 Interview with village head of the Hangtuo Town**

### **Estuary Regulation Project of Datong Town**

242. The original address is located in the town of Datong and Shou Changjiang interchange, in order to restore the original riverbed width and reduce the height of the whole region the original 4 AHs and 1 company affected by LA and demolition. According to the principles of the World Bank 's immigration policy, after indebt discussion, the relocation plan was cancelled and only 1 cement prefabricated sites was relocated. In June 2017, the project was cancelled due to changes in the project.



**Figure 11 Confirmation meeting of Datong Town Project and the scene of the relocated enterprise**

### **10.3 Grievance Redress Mechanism**

243. During the preparation and implementation process of RAP, public participation is encouraged. But some unforeseen problems may occur during the whole process. In order to solve the problem effectively, ensure the successful implementation of the project construction and LA. The PMO has established a transparent and effective complaint and grievance procedure. The following grievance procedure will be followed.

- Stage 1: If the APs are dissatisfied with the RAP, the APs can express their opinions to the “Villager Supporting Group to Zhejiang Qiandao Lake and Xin’an River Basin Water Resources and Ecological Environment Protection Project” and the group will make timely feedback within 2 weeks;

- Stage2: If APs were no satisfied with outcomes, they can put forward an oral or written complaint to the village committee; if it is an oral complaint, it will be handled and kept as written record by the village committee. Village committee will solve it in two weeks.
- Stage3: If APs still fell dissatisfied with the decision of the stage 2, they can put forward grievance to county PMO after receiving the decision. And county PMO will solved it in two weeks.
- Stage4: If APs still fell dissatisfied with the decision of the county PMO, they can put forward grievance to district People’s government after getting the decision.
- Stage5: If APs still fell dissatisfied with the decision of the county PMO, they can put forward grievance to city project IA after receiving the decision, or they can go to the civil court according to the Civil Procedure Law.

244. APs can put forward grievance in any terms, including compensation rates and so on. Grievance procedure and channel mentioned above will be told to APs by manners such as meeting, notices and issuing of information booklet to ensure APs fully understand their right of grievance and how to conduct it. At the same time, multi-media will be used to make the APs know what they need to know, and the opinion and suggestions from all terms will be arranged to information advocacy, then researched and handled in time by resettlement agency at all levels. All agencies will accept complain and grievance of APs at free, reasonable fee because of these activities will be paid by contingencies of the total budget. During the whole construction process, the grievance procedure will be effectively to ensure APs can use it to solve relevant problems.



## 11 Entitlements Matrix

Entitlements Matrix of Chun'an Sub-project

Number	Social Project impacts	Name of Component	Affected degree	Affected population	Legal Framework and Policies of Resettlement	Compensation Rates for Resettlement Impacts of the Project
1	Permanent Acquisition of Collective Land	Rural drinking water safety promotion	39.4 mu	71 households with 272 persons	Comprehensive compensation paid to rural collective economic organizations of land acquisition and the farmers, for the development of production and living resettlement of farmers; to obtain ground attachments compensation; access to training and employment opportunities, take measures to reduce its operating income; to meet the conditions of participation can enjoy the old-age insurance for Landless Farmers	Comprehensive compensation for arable land and construction land: PinMen Township, ZhongZhou Town, WangFu Township 4000yuan/mu, Comprehensive compensation for forest land and unused land: 19000 yuan / mu;
2	Temporary Land Occupation	Rural drinking water safety promotion	910.31 mu	1514 households with 6413 persons	Comprehensive compensation paid to rural collective economic organizations of the APs, for the development of production and living resettlement of the APs	Crop compensation fee: 1000 yuan/mu of arable land in general; construction projects completed by the unit to be restored according to the original standard, the original size
		Comprehensive management of small watershed	58.4 mu		Comprehensive compensation paid to rural collective economic organizations of the APs, for the development of production and living resettlement of the APs	
		Embankment reinforcement and	402.98 mu		Comprehensive compensation paid to rural collective economic organizations of the APs, for	

Number	Social Project impacts	Name of Component	Affected degree	Affected population	Legal Framework and Policies of Resettlement	Compensation Rates for Resettlement Impacts of the Project
		river improvement			the development of production and living resettlement of the APs	
3	Affected Infrastructure and Ground Attachments	All Component			The affected infrastructure and the ground attachment will be compensated by the project unit in accordance with the reset price to the property right unit; the property right unit will be restored or rebuilt, or the project unit will be rebuilt according to the original standard and the original scale	At full replacement price
4	Affected females	All involved				
5	Grievances and appeals	Compensation rates, payment and resettlement measures		All APs	Free; all costs so reasonably incurred will be disbursed from the contingencies	

### Entitlements Matrix of Jiande Sub-project

Numbers	Impacts type	Project	Impacts degree	Affected person	Compensation and resettlement policy	Compensation standard
1	Permanent acquisition of collective land	HangTou Town Forest road engineering	Rural collective land 199 mu	33 households with 108 persons	Cash compensation	Arable land compensation fee: 24000 yuan / mu; green crop compensation fee: 1600 yuan / mu of arable land ;
2	Temporary occupation of state owned land	Datong Town Bridge reconstruction project	Temporary occupation of state owned land 5 mu		The temporary use of state-owned land in the land where the city and county land administrative departments for approval. The temporary land use within the urban planning area will be approved by the relevant administrative department of urban planning before approval. The land user shall according to the ownership of land, and land administrative departments signed the contract for the temporary use of land, and pay the temporary use of land compensation fees according to the contract, temporary land will use the land according to the use of temporary land use contract, shall not build permanent structures. After the expiration of temporary land use occupation, the temporary land use units and individuals are responsible for the restoration of the original use of the land; the loss cannot be restored, and will bear the corresponding economic compensation responsibility.	The temporary occupation of state-owned land in this project is free to use. The ground attachments will be compensated in accordance with the replacement price or the PIU will be responsible for the restoration according to their original construction standards and the original scale
	Temporary occupation of collective	HangTou Town Forest road engineering	Temporary occupation of collective land 6 mu	16 households with 79 persons	The project construction unit in accordance with the temporary land compensation policy of the local government, should give the compensation to landowners to be able to plough and sow, and young crop compensation should be paid to the land contractors	Green crop compensation fee: 1600 yuan / mu of arable land in general; the construction project will be completed by the PIU responsible for the restoration of the original size, according to the

	tive land					original standard
	HangTou Town New ecological 13 weirs	Temporary occupation of collective land 6 mu	20 households with 62 persons	The project construction unit in accordance with the temporary land compensation policy of the local government, should give the compensation to landowners to be able to plough and sow, and young crop compensation should be paid to the land contractors		Green crop compensation fee:1600 yuan / mu of arable land in general; the construction project will be completed by the unit responsible for the restoration of the original size, according to the original standard
	HangTou Town Ecological transformation of dyke 10.2 km	Temporary occupation of collective land 5 mu	30house holds with 95 persons	The project construction unit in accordance with the temporary land compensation policy of the local government, should give the compensation to landowners to be able to plough and sow, and young crop compensation should be paid to the land contractors		Green crop compensation fee: 1600 yuan / mu of arable land in general; the construction project will be completed by the unit responsible for the restoration of the original size, according to the original standard
	HangTou Town Ecological restoration 4.2 km	Temporary occupation of collective land 3mu	19house holds with 61 persons	The project construction unit in accordance with the temporary land compensation policy of the local government, should give the compensation to landowners to be able to plough and sow, and young crop compensation should be paid to the land contractors		Crop compensation fee: 1600 yuan / mu of arable land in general; the construction project will be completed by the unit responsible for the restoration of the original size, according to the original standard
	HangTou Town New forest drainage ditch 16.2 km	Temporary occupation of collective land 5 mu	34house holds with 106 persons	The project construction unit in accordance with the temporary land compensation policy of the local government, should give the compensation to landowners to be able to plough and sow, and young crop compensation should be paid to the land contractors		Crop compensation fee:1600 yuan / mu of arable land in general; the construction project will be completed by the unit responsible for the restoration of the original size, according to the original standard
	Ecological comprehensive treatment of Datong Creek of	Temporary occupation of collective land 1576.15mu	1783 households with 5474	The project construction unit in accordance with the temporary land compensation policy of the local government, should give the compensation to landowners to be able to plough and sow, and young crop compensation should be paid to the land contractors		Crop compensation fee:1600 yuan / mu of arable land in general; construction projects completed by the unit to be restored according to the original

		Datong Town		persons		standard, the original size
3	Affected Ground Attachments	All Component			The affected infrastructure and ground attachments will be compensated by the PIU according to the replacement price; the property right unit will be restored to its original structure, or the PIU will be restored to the original standard and the original scale	At full replacement price
4	Affected females	2902 females.				1) have priority in employment; 2) receive agricultural and nonagricultural skills training; 3) receive resettlement information and participate in public consultation; 4) attend a special FGD for women to improve resettlement awareness; and 5) have the right to sign the compensation agreement.
5	Grievances and appeals	Compensation rates, payment and resettlement measures		All APs	Free; all costs so reasonably incurred will be disbursed from the contingencies	

## **12 Monitoring and Evaluation**

245. In order to ensure the smooth implementation of RAP, realize resettlement targets, the project will monitor, including the internal monitoring and external monitoring, the implementation of resettlement actions according to the requirements of OP4.12-Involuntary Resettlement and Guidelines for M&E issued by WB.
246. Internal Monitoring will be conducted by the Chun'an PMO and Jiande PMO, to ensure the LA activities can comply with the resettlement principles and plans listed in the RAP. The purpose of internal monitoring is to make the resettlement agencies to maintain good functions in the process of implementation of RAP.
247. Chun'an PMO and Jiande PMO will engage an Independent External Resettlement Monitor. The objectives of external monitoring are::
- Verifying resettlement implementation
  - Evaluating the effectiveness, impacts and sustainability of LA, compensation and resettlement activities;
  - Determining if such activities meet the safeguard policies and requirements in the RAP; and
  - Draw on experience and lessons for future safeguard policy making and project planning.
  - Identify issues or potential issues and recommend time-bound recommendations to allow the Chun'an PMO, Jiande PMO and relevant agencies to take action or improve resettlement implementation
248. Independent external resettlement monitoring will be conducted by the external monitor to check all resettlement activities such as LA, compensation and livelihood restoration; to track the resettlement activity and evaluate whether the resettlement activities comply with national laws, regulations and OP4.12; to track whether APs' living and livelihood level improving or at least maintain the level before the project. External Resettlement Monitor will put forward suggestions to relevant agencies about the problems found during the monitoring, and to ensure the problems can be resolved in time.

### **12.1 Internal Monitoring**

249. Chun'an PMO and Jiande PMO will establish an internal resettlement monitoring mechanism to check and manage resettlement activities. They will establish database for LA and resettlement, and uses it to make up RAP and monitor all resettlement and units affected by LA, proceed internal monitoring to the whole process of resettlement preparation and implementation.

#### **12.1.1 Implementing Procedure**

250. During the implementation process, Chun'an PMO, Jiande PMO and PIUs collect and record information about resettlement and affected units according to the monitoring samples, deliver record of activities to PMO of the PPMO and keep continuous implementing monitoring. The PPMO will check implementing situation timely.

#### **12.1.2 Monitoring Content**

- Payment, usage and in place of compensation funds for LA, implementing progress and quality of production development project for resettlement;
- Investigation, coordination and suggestions for main problems in resettlement and IA during LA and resettlement implementing process;
- Recovery situation of resettlement HHs' income level;
- Recovery situation of vulnerable groups;

- Payment, usage and in place of compensation funds for resettlement and LA units;
- Degree of participation and negotiation during the LA and resettlement process;
- Training for resettlement and its effect;
- Work organization, training, schedule and efficiency of local resettlement office.
- Grievance/ complaints: content; treatment measures and handling results

### **12.1.3 Internal Monitoring Report**

251. Internal monitoring reports will be directed by the Chun'an PMO every three months and then submit to the PPMO. The PPMO will Prepare relevant data and information, and submit an internal monitoring report to WB at the end of every year.

## **12.2 External Monitoring**

### **12.2.1 Independent Resettlement Monitor**

252. PMO will engage an Independent Resettlement Monitor to put forward external monitoring. The independent monitoring and evaluation unit regularly monitors the resettlement activities, and puts forward advisory opinions. It takes tracking monitoring to the resettlement' living and livelihood level, and provides M&E report to the all PMO and the WB.

### **12.2.2 Methodology and Scope of External Monitoring**

- Prepare resettlement M&E outline
- Develop M&E information database  
Prepare investigation outline, questionnaires and record card for AHHs and affected villages
- Investigation design  
Sampling ratio: land occupation affects 30% of APs.
- Baseline investigation

253. Conduct baseline investigation needed by independent M&E to resettlement and villages affected by LA, gain baseline information for the living and livelihood level (living, production operation and income level) of resettlement and affected units.

- Build M&E information system  
Build M&E information system, establish database according to the classification of all kinds of data involving M&E, and provide computer aid to analysis and follow up monitoring.
- M&E investigation  
Local social-economy investigation: investigate the social-economy situation in project area;  
Resettlement IA monitoring: investigate the work ability and efficiency of resettlement IA;  
Typical temporary LA resettlement monitoring: compensation arrival rate, livelihood resettlement, rate of income change, employment rate, and degree of satisfaction to resettlement;  
Communal facilities: monitor the compensation; proceed of recovery and rebuild of the capacity of the communal facilities.;  
Communication and information disclosure: engaged in the Prepare of RAP and participate in the activities during the implantation process, monitor the effect of participation and the information public situation;  
Grievance: monitor the operating mechanism and efficiency of the grievance.
- Grievance/ complaints: content; treatment measures and handling results
- Report of external Monitoring
  - ◇ Dec. 2017, Determining M&E agency
  - ◇ Mar. 2018, preparing M&E outline and questionnaires, establishing monitoring mechanism, determining tasks and choosing monitoring sites.
  - ◇ May 2018, submitting No.1 M&E report (baseline report).
  - ◇ Dec 2018, submitting No.2 M&E report.

- ◇ Jun 2019, submitting No.3 M&E report.
- ◇ Dec 2019, submitting No.4 M&E report.
- ◇ Jun 2020, submitting No.5 M&E report.
- ◇ Dec 2021, resettlement completion report.

### 12.2.3 Monitoring Indicators

- Social-economy indicator: per capita income, GDP and employment rate
- Agency indicator: personnel consist, personnel quality, regulatory framework, facility, finishing rate of affairs handling
- Resettlement affected by LA: compensation arrival rate, livelihood resettlement, rate of income change, employment rate, and degree of satisfaction to resettlement.
- Infrastructure: compensation arrival rate.

Items/elements	Contents	Key indicators
Permanent land acquisition and temporary impacts	Progress of construction land approvals and delivery	Construction land approval documents; Land acquisition amount, type and Impact; Civil works progress and linkage with land acquisition activities
	Temporary land use	Amount and type of temporary land use; Temporary land use compensation and disbursement
	Permanent Land compensation standards and implementation	Amount and type Permanent land acquisition; Permanent land acquisition compensation standard and disbursement
	Compensation standards and implementation	Compensation standard(structures) and change; Compensation payment; Transition fees delivered
	Living conditions of before and after resettlement	Comparison of infrastructure; Per capita housing area; Community facilities; Distance from the center the county and township; Satisfactory of sampling survey
Provision of Assistance and Support	Cash compensation funds	Disbursement of cash assistance to APs or vulnerable HHs
	Land adjustment	Variation of per capita lands before and after LA; Land for land program, if any; Quality and distance of adjusted land;
	Production resettlement mode	Impact to the production mode of farmers; Employees number of non-farm payrolls; Variation of crop species; Impact to the livestock;
	Variation of income	Per capita net income of rural residents; Disposable income of urban residents;
	Employment	Proportion of three main industries employee; Proportion of women in small business; Number of migrant workers;
	Training	Times, type and time of training; Benefits, number and effective of training;
	Satisfaction of resettlement	Satisfactory of sampling survey;
	Compensation	Compensation standard (structures) and variation; Compensation payment method; Compensation for the shutdown period
	Housing reconstruction and demolition	Enterprise reconstruction way; Household number of resettlement; Number of enterprise expansion; Number of close down
Restoration	Number and income of employees; income of enterprises; Satisfaction of sampling employees and operators	
Funds availability and application	Availability of funds	Funds sources and payment
	Allocation	Allocation flows
Vulnerable households	Vulnerable households	Type of the vulnerable and Impacts
	special assistance measures	Measures implementation (timely, subsidy etc.)



Items/elements	Contents	Key indicators
Gender matters	participation	No. of women participating in meetings, DMS, accepting payments, Women hired during construction and other employment opportunities
Resettlement complaint and grievance	Resettlement complaint and grievance cases	No. of issues/problems/complaints received, responded to, addressed and resolved in a timely manner Available staff and resources to address grievances Timely reporting of grievances
Public consultation and information disclosure	Public consultation and information disclosure activities	Times, population, time, site, topic and efficiency; Way, content and response of information disclosures
Organizational Set-up	Clear roles and responsibilities, coordination and reporting	No. of qualified staff Coordination meetings and follow-ups Training to improve capacity of staff Monitoring, preparation of reports and submission
Grievance Redress	GRM being followed	No. of issues/problems/complaints received, responded to, addressed and resolved in a timely manner Available staff and resources to address grievances Timely reporting of grievances