

**Asia Development Bank Financed
Shandong Pollution Control Project in Hai River Catchment Basin**

Shanghe Wastewater Treatment Plant

Resettlement Plan

Planning/Construction Bureau of Shanghe County

August 2005

THIS IS NOT AN ADB BOARD APPROVED DOCUMENT

(with the government letter head paper)

Endorsement Letter of the Resettlement Plan

The Planning/Construction Bureau of Shanghe County has prepared the resettlement plan (RP) for the Asian Development Bank (ADB) financed urban wastewater treatment project in Shanghe County. This resettlement plan fully complies with the requirements of the relevant laws, regulations and policies of the People's Republic of China and Shandong Province as well as the ADB policy on involuntary resettlement.

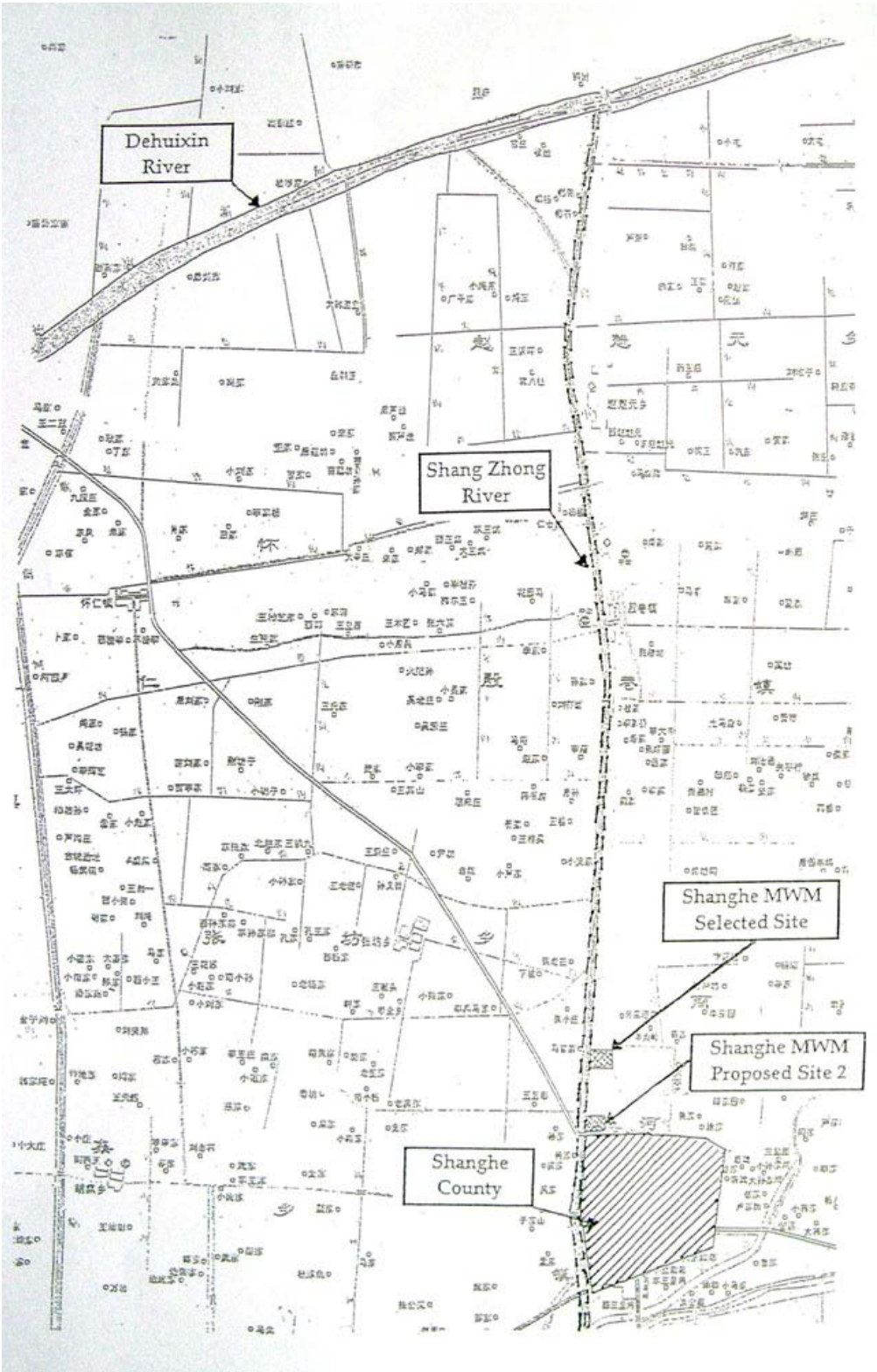
The Planning/Construction Bureau of Shanghe County hereby confirms the content of this resettlement plan (RP) and will guarantee the land acquisition, compensation, economic rehabilitation being implemented and full budget being provided according to the provisions of this resettlement plan. This RP is based on the feasibility study report and the RP social-economic surveys. If the land acquisition scope in the detailed drawings is found different from what has been described in the feasibility study report and if that discrepancy will cause the substantial resettlement impacts, this RP shall be further modified for approval by ADB before its implementation.

------(signature)

Magistrate of the People's Government of Shanghe County

July 2005 (date)

Map Showing Project Site of Shanghe WTP Sub-project



Executive Summary

Shanghe County Wastewater Treatment Project (WTP) is composed of two components: (i) building a wastewater treatment plant with a daily treatment capacity of 40,000 tons; and (ii) construction of a 20.96 kilometer pipeline network and 2 pumping stations. The government of Shanghe County is to be the project implementation agency (IA), and the planning and construction bureau under the government will be the responsible institution for the sub-project (Project component) implementation.

The sub-project will require permanent land acquisition from the present farmland of three villages of Shanghe Township and one village of Zhangfang Township, with a total area of 69.95 Chinese *mu*, affecting 52 farmer households or 245 persons. The subproject will also cause temporary land occupation, mainly of the urban streets and roadside sewer canals, with a total area 206,235 square meters but no directly affected person (AP). Although 69 people of 13 business sites will be indirectly affected by the temporary land occupation during the sewer construction, the impact is quite small and no building or structures has to be relocated or demolished.

In order to avoid or minimize land acquisition impacts, close consultation on project site has been made with local government officials and village committees (VCs) during the Feasibility Study (FS) stage, the best site was recommended by comparison with alternative sites.

The Resettlement Plan (RP) is based on the *Land Administration Law of PRC* (1998) and related matching policies, *Decision to Deepen Reform and Strictly Enforce Land Administration by the State Council* (Document [2004] No.28), and also related policies of Shandong Province. Meanwhile, the RP was prepared in compliance with ADB's *Policy on Involuntary Resettlement* and relevant social safeguard policies. Based on the above policies and through consultation with local governments and APs, the resettlement principles for the sub-Project are established as follows:

(i) Compensation and entitlements provided to APs are at least as adequate as to maintain their "without project" standard of living, with prospect of improvement; (ii) all APs, titled or non-titled, are taken into account for compensation and resettlement assistance; (iii) land redistribution shall ensure per capita minimum farm-land holding to maintain livelihood standards in post-resettlement period; (iv) where land acquisition per capita is not sufficient to maintain livelihood, compensation shall be provided for APs in cash or kind for replacement land for other income-generating activities; (v) all APs shall be adequately informed on eligibility for compensation, mode, rates and standards, restoration plans for livelihood and income, project timing, and shall be involved in RP implementation; (vi) no land acquisition shall take place unless replacement land or sufficient compensation for resettlement are given to APs. (vii) the compensation and

resettlement operations shall be monitored by the EA and an independent/third party; (viii) vulnerable groups should receive special assistance or treatment to ensure their livelihood. The APs listed in the RP shall have the opportunity to benefit from the project; (ix) resettlement plan should be combined with the overall county/city/district planning; and (x) resettlement budget should be made fully and thoroughly to cover all aspects.

The affected persons have been informed of the key elements of the RP by various means, such as meetings, interviews, village group discussions, public consultation workshops, and community consultations, during which local representatives have participated in the planning and their concerns have been integrated into the RP. The Chinese version of Resettlement Plan had been sent to the governmental department of Shanghe County, and a brochure for resettlement were distributed to affected villages and households in April 2005, and feedback comments from village committees have been collected by Shanghe County Project Management Office (SCPMO). The RP is subject to approval by Shandong Provincial Project Management Office (SPPMO) and ADB, and will be posted on ADB website. The SCPMO will be responsible for the supervision of RP implementation, follow-up consultation and grievance redress. The grievance redress procedures have been clearly described in this RP.

For permanent land acquisition, the compensation rate is based on the latest policies issued in Shandong province, with the average annual output value (AAOV) at 1,200 yuan per mu, and the compensation fees for both land compensation and resettlement subsidies are rated at 21 times AAOV. These compensation fees will be paid directly to affected rural collectives, and will be further distributed to individual APs on an equal basis after land redistribution. Compensation for standing crops will be paid directly to the owners of the crops.

The resettlement and income rehabilitation strategies include land redistribution, cash compensation, skill training for APs, project related employment and other measures. APs who lose their farmland will find employment in intensified farming work or non-agricultural employment to increase their income after related skills training.

Land acquisition is planned to commence in November 2005, and to be completed by January 2006. The civil works shall not take place before compensations for the APs are fully paid. In order to achieve the successful implementation of RP, besides the internal monitoring, an independent external agent will conduct external monitoring every six months. The cost estimate for land acquisition and resettlement is 5.98 million Yuan (2005 current price), including the basic cost covering compensation for permanent land acquisition and temporary land occupation; related taxes and fees; and a contingency of 10% basic costs. The RP budget accounts for 6.3% of the total sub-project budget.

ABBREVIATIONS AND ACRONYMS

AAOV	Average Annual Output Value
ADB	Asian Development Bank
AP	Project Affected Person
DMS	Detailed Measurement Survey
EA	Project Executing Agency
FS	Feasibility Study
HH	Household
IA	Project Implementation Agency
LRB	Land and Resources Bureau
mu	Chinese land area unit of measure: 1 mu = 0.0667 ha, or 1 ha =15 mu
MLR	Ministry of Land and Resources
PGSC	People's Government of Shanghe County
PPTA	Project Preparatory Technical Assistance
RMB	Renminbi—another word for the PRC Currency, the Yuan
RP	Resettlement Plan
SPG	Shandong Provincial Government
SPPMO	Shandong Provincial Project Management Office
TOR	Terms of References
WTP	Wastewater Treatment Plant
Yuan	PRC's currency

Key terms used in this report

Affected Persons (APs) includes any people, households, firms or private institutions who, on account of changes that result from the project will have their (i) standards of living adversely affected; (ii) right, title, or interest in any house, land (including residential, commercial, agricultural, forest, and/or grazing land), water resource, and/or any other moveable or fixed assets in their possession or disposal—restricted or otherwise adversely affected, whether in full or in part, permanently or temporarily; and/or (iii) business, occupation, place of work or residence, or habitat adversely affected, with or without displacement.

Replacement Cost means the method of valuing assets to replace the loss at market value, or its nearest equivalent, plus any transaction costs such as administrative charges, taxes, registration, and titling costs. Where national law does not meet this standard, the replacement cost will be supplemented as necessary. Replacement cost is based on market value before the project or dispossession, whichever is higher. In the absence of functioning markets, a compensation structure is required that enables affected people to restore their livelihoods to levels at least equivalent to those maintained at the time of dispossession, displacement, or restricted access.

Allocation of land use right (*tu di shi yong quan hua bo*) indicates that land use right is delivered to a land user either free of charge or after paying compensation and resettlement subsidies, etc. based on China laws..

Assignment of land use right (*tu di shi yong quan chu rang*) means that government transfers the land using right to a land user in certain years, and in turn the latter will pay the charges for land lease to the government.

Eviction of land use right (*tu di shi yong quan shou hui*) means that in a special situation, upon the consideration of public interests, the government regains the land use right from a unit or individuals according to relevant laws.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	I
I. INTRODUCTION AND PROJECT BACKGROUND	1
1.1 INTRODUCTION	1
1.2 PROJECT BACKGROUND AND DESCRIPTION	2
1.2.1 <i>Project background</i>	2
1.2.2 <i>Project description</i>	3
II. IMPACTS OF LAND ACQUISITION AND RESETTLEMENT	6
2.1 MEASURES TO MINIMIZE LAND ACQUISITION AND RESETTLEMENT	6
2.1.1 <i>Principles for project design and site selection</i>	6
2.1.2 <i>Measures to minimize adverse impact of the project</i>	6
2.2 PROJECT IMPACT OF LAND ACQUISITION.....	8
2.3 POPULATION AFFECTED	10
III. SOCIAL ECONOMIC CHARACTERISTICS	12
3.1 SOCIO-ECONOMIC SITUATION OF SHANGHE COUNTY	12
3.2 SOCIO-ECONOMIC SITUATION OF AFFECTED TOWNS AND VILLAGES	12
3.2.1 <i>Shanghe Township</i>	12
3.2.2 <i>Zhangfang Subtownship</i>	13
3.3 SOCIO-ECONOMIC SITUATION OF AFFECTED VILLAGES	14
3.3.1 <i>Tongjiadaokou Village of Shanghe Township</i>	14
3.3.2 <i>Zhanglaozhuang Village of Zhangfang Township</i>	14
3.3.3 <i>Xisanli Village of Shanghe Township</i>	15
3.3.4 <i>Beiguan Village of Shanghe Township</i>	15
3.4 SOCIO-ECONOMIC SITUATION OF DIRECTLY AFFECTED PEOPLE	16
3.4.1 <i>Gender Analysis</i>	16
3.4.2 <i>Age Structure</i>	16
3.4.3 <i>Education background of APs</i>	17
3.4.4 <i>APs' Occupation structure</i>	18
3.4.5 <i>Income situation and vulnerable groups</i>	18
3.5 LAND TENURE AND LAND DISTRIBUTION.....	19
3.6 ASSESSMENT OF LAND ACQUISITION IMPACT	19
3.6.1 <i>Permanent land acquisition for the WTP</i>	19
3.6.2 <i>Impact caused by sewer pipeline construction</i>	20
3.7 LESSONS FROM PREVIOUS CASES AND IMPLICATIONS TO THE RP	21
IV LEGAL AND POLICY FRAMEWORK	21
4.1 BRIEF INTRODUCTION	21
4.2 ADB POLICIES.....	22
4.3 CHINA LAWS AND REGULATIONS	24
4.3 PROJECT COMPENSATION AND RESETTLEMENT POLICIES	27

4.4	COMPENSATION STANDARDS FOR VARIOUS LOSSES	28
4.4.1	<i>Compensation for permanent land acquisition</i>	28
4.4.2	<i>Compensation for young crops.....</i>	28
4.4.3	<i>Compensation for temporary land occupation</i>	28
4.5	ELIGIBILITY AND ENTITLEMENT OF THE PROJECT	29
V	PROCEDURES FOR PARTICIPATION, CONSULTATION AND GRIEVANCE	
REDRESS.....		30
5.1	GENERAL	30
5.2	PARTICIPATION DURING PROJECT PREPARATION	30
5.3	PARTICIPATION PLAN	32
5.4	GRIEVANCE AND COMPLAINT	32
5.4.1	<i>Reception of complaints</i>	33
5.4.2	<i>Grievance redress procedures</i>	33
VI	COMPENSATION, RESETTLEMENT AND INCOME REHABILITATION	34
6.1	COMPENSATION FOR PERMANENT LAND ACQUISITION	34
6.2	COMPENSATION FOR TEMPORARY LAND.....	34
6.3	LIVELIHOOD REHABILITATION PLAN.....	35
6.3.1	<i>Land redistribution</i>	35
6.3.2	<i>Cash compensation.....</i>	35
6.3.3	<i>Education and skill training for APs</i>	35
6.3.4	<i>Gender consideration during resettlement</i>	35
6.3.5	<i>Support to vulnerable groups</i>	36
6.4	PROJECT RELATED EMPLOYMENT	36
6.5	ENVIRONMENT CONTROL	36
VII	INSTITUTIONAL ARRANGEMENT	37
7.1	ORGANIZATIONAL SET-UP	37
7.2	ACCOUNTABILITY OF EA.....	38
7.2.1	<i>SPPMO.....</i>	38
7.2.2	<i>Project Office of Shanghe county</i>	38
7.2.3	<i>Affected villages</i>	38
7.2.4	<i>External monitor</i>	38
7.3	STAFFING AND TRAINING PLAN.....	39
7.3.1	<i>Staffing.....</i>	39
7.3.2	<i>Training plan</i>	39
7.4	CAPACITY BUILDING OF RESETTLEMENT ORGANIZATION	39
VIII.	IMPLEMENTATION SCHEDULE.....	41
8.1	IMPLEMENTATION PRINCIPLE.....	41
8.2	IMPLEMENTATION SCHEDULE	41
IX.	MONITORING, EVALUATION AND REPORTING SYSTEMS	43
9.1	INSPECTION DURING IMPLEMENTATION.....	43

9.2	CONTENTS TO BE MONITORED	43
9.2.1	<i>Internal inspection</i>	43
9.2.2	<i>External inspection & evaluation</i>	43
9.3	TIMING FOR EXTERNAL MONITORING AND EVALUATION	45
9.4	REPORTING SYSTEM	45
X.	RESETTLEMENT BUDGET AND FUNDING	46
10.1	BASIC COSTS	46
10.2	TAXES AND FEES	46
10.3	CONTINGENCY COSTS	46
10.4	FUND DISBURSEMENT	46
10.5	FUNDING OF RP BUDGET	47
ANNEX 1.	TOR AND BUDGET FOR PROJECT EXTERNAL MONITOR	49

LIST OF TABLES

Table 1	Comparison of options for WTP site selection	7
Table 2	Comparison of Optional Pipeline Sites Selection.....	8
Table 3	List of project land acquisition	9
Table 4	Project impact caused by temporary land occupation.....	10
Table 5	Basic Socio-Economic Conditions of Affected Villages.....	15
Table 6	Gender structure of directly affected APs.....	16
Table 7	Age structure of directly affected people.....	17
Table 8	Education background of APs.....	17
Table 9	Occupation structure of APs	18
Table 10	Assessment of impact caused by land acquisition.....	20
Table 11	Excerpt of relevant laws, regulations and policies	25
Table 12	GF [2004] Document No. 28 and implementation measures of project ..	26
Table 13	Project resettlement principles—Summary	27
Table 14	Compensation standards for permanent land loss.....	28
Table 15	Project entitlement matrix	29
Table 16	Record of participation and consultation by interested persons.....	31
Table 17	Public consultation plan	32
Chart 1	Organizational set-up for Shanghe Count WTP Project.....	37
Table 18	Staffing of the resettlement organizations.....	39
Table 19	Time schedule for RP planning and implementation.....	41
Chart 2	Time schedule of RP activities	42
Table 20	Schedule for external monitoring and evaluation	45
Table 21	Budget for land acquisition and resettlement.....	48

I. Introduction and Project Background

1.1 Introduction

1. The resettlement plan was prepared based on the following documents, ADB *Policy on Involuntary Resettlement*¹, *Resettlement Handbook—A Guide to Good Practice*², the *Resettlement Operations* (2003), *Gender Checklist: Resettlement* (March 2003), and other relevant social policies, as well as the laws, regulations and policies of China and Chinese local governments. All these have provided a policy framework for mitigating the adverse impacts from Shanghe County Urban Waste Water Treatment Plant—a sub-project of Shandong Pollution Control Project in Hai River Catchment Basin, and have provided the policy base for formulating the income rehabilitation measures for the project affected persons (APs).

2. For both the PRC and the ADB, the over-riding objective of resettlement planning is to ensure that persons unavoidably losing land or property as a result of a development project attain equal to or better than livelihoods and living standards when the project had not occurred. All policies, proposals and compensation measures contained in this RP are designed to meet this objective. The project executing agency (EA)—Shandong Provincial Project Management Office (SPPMO) has clearly indicated that the People's Government of Shanghe County (PGSC) is the sub-project implementation agency (IA), and the Planning and Construction Bureau under PGSC will be responsible for organization of the project implementation.

3. The preparation of this RP was based on: (i) relevant Project reports: particularly the Project Feasibility Study (FS), Environmental Impact Assessment Report, and the Resettlement Plan (draft) prepared by Shandong University in 2004-2005; (ii) discussions with the principal authors of the above documents, particularly the major author of RP; (iii) field visits to the proposed project site during the initial technical aid period; (iv) consultations with various levels of local government, village leaders and APs; and (v) socio-economic surveys of affected households carried out during the PPTA stage (March 2005) by Shandong Statistical Bureau.

4. The impact data used in this RP is based on the wastewater treatment plant (WTP) and pipelines data in Feasibility Study. This data has a high level of reliability. However, preliminary design and detailed design may require minor modifications to the wastewater treatment plant and pipelines. In order to fully assess project impacts prior to their occurrence, RP impact data and cost estimates will be reviewed and amended

¹ Asian Development Bank, *Involuntary Resettlement*, Manila, November 1995.

² ADB, *Handbook on Involuntary Resettlement: A Guide to Good Practice*, Manila, 1998.

following the results of the Detailed Measurement Survey (DMS). The results will be updated, with final budget variation, and the revised RP will be submitted to ADB for approval. The RP has been endorsed by PGSC and will be approved by SPPMO concurrence.

1.2 Project background and description

1.2.1 Project background

5. Currently there is no WTP in the urban area of Shanghe County, where the rainwater drainage system also serves for the sewer pipeline network. Industrial and municipal wastewater has been discharged directly into the drainage pipelines or canals and then to natural rivers, causing heavy pollution not only to the natural environment and the receptor waters, but also to the shallow underground water system. The water quality monitoring records, provided by Shanghe County Environmental Monitoring Station, show that quite a number of data have surpassed the Type III level according to *Environmental Quality of Surface Water Standards*, which means that the water is no longer fit for use. The careless discharge of wastewater has worsened the water conditions and adversely affected the industrial and agricultural production and living quality of local residents, causing both economic and health problems. From 2003 the government of Shanghe County began its planning for a water treatment plant, and in 2004 the government began active preparations for an urban wastewater treatment project.

6. In the absence of a wastewater treatment complex and related wastewater collection pipeline network, the present drainage system of Shanghe County serves both for discharge of rainwater and wastewater. As a result, a large amount of industrial and urban wastewater has been directly discharged into the local rivers—Tuhai, Tuma, Dehui, Shangxi, Shangzhong, Shangdong and other streams. The wastewater causes heavy pollution to the natural environment and shallow underground water system. What is worse, through the natural rivers the untreated wastewater find its way into Hai River and continue to bring heavy pollution to the industrial and drinking water for rural and urban areas along the lower reaches of Hai River.

7. In accordance with China's national social development plan, a tremendous project is to be carried out to transfer the water from China's south to relieve water shortages in the north. In order to ensure the successful implementation of the great south-to-north water transfer project and ensure the safety and quality of water transferred, the local governments of affected regions have to take measures to control and reduce pollution.

8. In the meanwhile, heavy pollution water dischargers are continuing to increase, with major pollution sources from the following business enterprises: Shanghe Hongye Cotton Textile Co. Ltd, Chengcheng Metal Product Company, Jinan Yingwang Metal

Company, Qingqi Corporation, Huaxin Foodstuff Co. Ltd, Linuo New Material Co. Ltd., Jinzhao Alcoholic Brewery Co. Ltd, among others. The above industrial enterprises have drastically increased the sum of pollution water discharge. As a result, the total discharge amount in 2005 is predicted to reach 5,140 tons per day. On this account, the wastewater treatment project aided by the ADB loan has become an imperative matter.

9. In order to guarantee the success of the South-to North Water Transfer Project and to safeguard the quality of water sources of down-stream regions as well as a sustainable socio-economic development of Shanghe County, the building of a water treatment project proves to be all the more a priority for the local government.

1.2.2 Project description

1.2.2.1 Sub-project components and land acquisition scope

10. The whole sub-project consists of two parts. The first part is the construction of a wastewater treatment plant (WTP), and the second part contains the pipe networks for the sewage and treated water. According to China's principles for construction of water treatment facilities, needs of the near future is considered with a view to the far future. Therefore, the Shanghe County WTP is designed with a treatment capacity of 40,000m³/day, which can meet an intermediate operation requirement until 2015. The site is selected with an area reserved (but not acquired) to its north for future expansions as needed.

11. The proposed site of WTP is located at the north of urban Shanghe County, on the eastern bank of Shangzhong River, north of Binhe Road, west of Shangzhong Road, and south of the crematory plant, with an available planning area of approximately 200 mu. The site is at present farmland for the collectives of two villages— Tongjiadaokou and Zhanglaozhuang. The WTP of Shanghe County will be located at a clear space 60 meters east of Shangzhong River, north of Binhe Road, 100 meters west of Shangzhong Road, and 60 meters south of the Crematory Plant, covering an area of 65 mu (4.33 hectares), measuring 200 meters from north to south and 220 meters from east to west.

12. According to the planned design of the Project Feasibility Study, the matching trunk pipeline network for the WTP of Shanghe County is to be laid along Binhe Road, while the trunk sewer pipelines are to be laid along the Northern Ring Road, Fumin Road, Xinyuan Road, Qingnian Road and Yinhe Road, and two pump stations will be built. One of the pump stations is located at the crossing of Yinhe Rd and Binhe Rd, covering an area of 1600 m² (2.4 mu) and consisting mainly of an office building, warehouse, pump house, power switchboard house, equipped with a d800mm gravitation intake pipe and a d800mm output gravitation pipe operating at 10,000 m³/day. The other station is located at the crossing of Qingnian Rd and Fumin Rd. The station will cover an area of 1700 m² (2.55 mu) and major building consists mainly of office rooms, storage house, pump house,

a power transformation and distribution house. The station will be equipped with a d1000mm gravity inlet pipe and a d1000mm outlet gravity pipe capable of 30,000 m³/day.

13. The sub-project is expected to temporarily occupy a land area of 68,672 m² or 103 mu during construction of 20.96km of new pipeline network for the sewage collection and 0.5 km of treated water outlet pipes.

1.2.2.2 Land Acquisition for Sub-Project and Land Occupation Impact

14. The specific site selected for WTP is located on a piece of land belonging in part to Tongjiadaokou Village, Shanghe Township; and in part to Zhanglaozhuang Village, Zhangfang Township, Shanghe County. The land, measuring 65 mu, of which 63 mu is farmland, is to be acquired for permanent use for the WTP. The two pump stations will need permanent land acquisition of 4.95 mu (or 3,300 m²), which is under collective ownership within the County's urban planning area and involves no structure demolition and household relocation, which will result in 245 persons loss part of their farmland permanently. In addition, the construction of pipeline network will have to temporarily occupy 103 mu of land but no demolition of households or business firms. However, the subproject will temporarily affect 1.9 mu of farmland, which is informally cultivated by two households in the river course.

15. The permanent land acquisition will affect 52 households or 245 persons in all. Temporary occupation of land will directly affect two rural households (12 persons) and will indirectly affect 13 business firms involving 69 persons with a minimum adverse effect.

1.2.2.3 Environment, social and economic benefits

16. It is expected that the project will bring the following environmental, social and economic benefits.

- (i) The sub-project will boost the sustainable social and economic development of Shanghe County. The urban waste water pollution has become a focal problem of all sections of society. Owing to the lack of waste water treatment facilities, great quantities of wastewater are poured into rivers that lead to the Hai River. As the wastewater travels long distances and affects many types of water resources, so it causes heavier harmful pollution to soil, water, air and living surroundings wherever it goes. The wastewater pollution has indirectly affected the growth of agriculture and the quality of residential environment, and has even affected the investment enthusiasm of foreign businessmen and, hence, the future of local sustainable socio-economic development. With the project, however, the sewage pollution will be greatly reduced and in turn will promote the local social and economic development.
- (ii) The sub-project will improve the living environment of the residents in

Shanghe County. Currently the sewage in Shanghe is discharged without any treatment, thus the living environment of the urban residents has been polluted. With some advanced technology adopted, the sub-project will bring noticeable improvement to the local living environment.

- (iii) The sub-project, conducted in accordance to the plan for social and economic development of Shanghe County, will improve its environment for outside investment. To guarantee the successful implementation of its long-term social and economic development plan, the government of Shanghe County has decided to make it a top priority to construct urban infrastructure facilities to create an excellent environment for both business investors and local residents. On that account, the WTP construction has been listed as a key project in Shanghe County.
- (iv) The sub-project will provide more employment opportunities to the local people. It is planned that the construction duration of the sub-project will last two years, during which it will provide some income earning opportunities for the local people in transportation and other services. When the WTP is put into operation, there will be 37 vacancies for employment. These will increase the income level of the local people to some extent, and more people will benefit from the sub-project construction.

1.2.2.4 Sub-project budget

17. The budget for the sub-project is estimated at RMB 94.89 million. The cost for land acquisition and resettlement is RMB 5.98 million, accounting for 6.3% of the total sub-project budget.

1.2.2.5 Project schedule and resettlement program

18. The construction for the sub-project is planned to start from March 2006 and to be completed in February 2008, lasting 24 months. Before full construction begins, preparation tasks for the project had been undertaken since June 2003, including the preparation of project proposal and environmental impact assessment report. Since May 2004, CDM Company has provided the technical assistance and assisted in the preparation of FS report, resettlement plan (RP) and environmental impact assessment (EIA) in accordance with the requirements for ADB loan application.

19. The preparation for the resettlement plan (RP) began from May 2004. From October 2004 up to now, the RP has been revised and updated under the guidance of CDM consultants. It is planned that land acquisition, compensation and resettlement will commence as from October 2005, when this project is approved by ADB.

II. Impacts of Land Acquisition and Resettlement

2.1 Measures to minimize land acquisition and resettlement

2.1.1 Principles for project design and site selection

20. Since the WTP site selection is related to the collection, treatment, discharge, reuse of the sewage and the environment protection, project design and site selection should abide by the following principles and requirements in addition to national and local rules and regulations on the protection of river and underground water resources:

- 1) in conformance with the master plan of the city;
- 2) at the downstream place for the urban water supply;
- 3) at the leeward side of the leading wind in the city area;
- 4) at the downstream of the urban drainage network, where it is easier to collect the sewage, to facilitate the installation of pipelines in terms of length and depth, and to make use of existing trunk sewer pipelines so as to minimize spending on pipelines;
- 5) where treated water can be discharged naturally;
- 6) where the existing trunk sewer pipelines can be reused;
- 7) where sufficient space is available for future extensions but less or no farmland will be affected;
- 8) where there is good water and power supply;
- 9) where there is easy access for operation management;
- 10) where the ground is level with good geological conditions for civil works;
- 11) in compliance with the rules and regulations on flood control and conservation of water and soil; and
- 12) at a protective distance from villages and residential area to avoid and minimize inconveniences to the public.

2.1.2 Measures to minimize adverse impact of the project

21. In accordance with the above-mentioned principles and ADB policy on involuntary resettlement, the PGSC and its planning/construction bureau as well as the design institute have selected the project site carefully. The site inevitably covers some farmland and some state-owned land and roads, however, the land size for permanent acquisition is not large, so that the number of APs is minimized and there is no house demolition and relocation involved. Nevertheless, all kinds of compensation measures have been prepared for the purpose of mitigating the adverse impact that may result from unavoidable land acquisition and temporary land occupation. Table 1 presents two alternative considerations compared in terms of land acquisition and resettlement for the site selection.

Table 1 Comparison of options for WTP site selection

Item	Option 1(Recommended)	Option 2 (alternative)
Location	North of urban Shanghe County, on the eastern bank of Shangzhong River, north of Binhe Rd, west of Shangzhong Rd, and south of the crematory plant, with an available planning area of approx. 200 mu. The site is at present the collective land of two villages — Tongjiadaokou and Zhanglaozhuang.	North of urban Shanghe County, east of Maguanzhai Village and Xiweiwan Rd., north of Xishangbei Rd., with an available planning area of approx. 210 mu, now the collective land of Majiazai Village.
Advantage	<ul style="list-style-type: none"> ·Original site for WTP in the Overall Planning of Urban Development, price of land acquisition is lower than that of Option 2. ·At downstream of urban drainage canals, easier for sewage collection. ·Next to Shangzhong River, convenient for treated water discharge. · At leeward of leading wind and downstream of origin for water supply, with little impact on the local residents. · Level ground and sufficient space for planned future extensions, no building or barrier structure. ·Convenient transport with main roads at east and west sides, available water supply from nearby funeral place. 	<ul style="list-style-type: none"> · Shorter distance from urban area than Option 1, saving 0.6 km pipelines. · Spacious ground with no problem of resettlement or building replacement. ·At downstream of urban drainage system, easier for sewage collection. ·At leeward of leading wind and downstream of origin for water supply. ·Near main road on the west, good transport condition.
Disadvantage	<ul style="list-style-type: none"> ·63 mu farmland acquisition besides 2 mu of ditch and canal, involving compensation for APs of 2 villages. ·Longer distance from urban area than Option 2, needing an extra 0.6 km length of pipelines. 	<ul style="list-style-type: none"> ·Nearer to Maguanzhai Village, with only the urban ring road in between, so that the WTP may cause greater disturbance to villagers when in operation. ·Further away from Shangzhong River than Option 1 site, needing an extra 0.5 km pipeline which runs westwards across Maguanzhai Village. ·Water and power supply in need of water well and installing new power lines. ·Present land for site being sizable good farmland, needing more compensation to villagers and new approval from land resource administrations and urban planning department.

Source: *Feasibility Study Report*. April, 2005.

22. According to the comparison of the two optional sites, there is little difference in terms of pipeline costs for sewage collection and treated water discharge. However, since Option 1 site is nearer to the discharge receptor and has better water and power supply conditions, and it will cause less adverse impact on the villagers and environment during construction and operation, it is considered to be the preferred site according to the overall urban land planning and land use planning. Therefore, Option 1 is recommended in the feasibility study report.

23. In addition, in accordance with the principle to put the WTP pipeline network

design in agreement with the overall urban planning of Shanghe County, the trunk pipeline is to be laid along Binhe Rd., while trunk sewage collecting pipelines are laid along Beihuan Rd, Fumin Rd, Xinyuan Rd, Qingnian Rd, and Yinhe Rd. Two pump stations will be built, one at the crossing of Yinhe Rd and Binhe Rd, the other at the crossing of Binhe Rd and Fumin Rd. The sewer pipeline scheme has also been compared in detail (see Table 2)..

Table 2 Comparison of optional pipeline sites selection

Item	Scheme 1 (recommended)	Scheme 2 (alternative)
sites	The trunk pipeline for WTP is to be laid along Binhe Rd., while trunk sewage collecting pipelines are to be laid along Beihuan Rd, Fumin Rd, Xinyuan Rd, Qingnian Rd, and Yinhe Rd. Two pump station will be built, one at the crossing of Yinhe Rd and Binhe Rd, the other at the crossing of Binhe Rd and Fumin Rd.	The trunk pipeline for WTP is to be laid along Shangzhong Rd., while trunk sewage collecting pipelines are to be laid along Beihuan Rd, Fumin Rd, Xinyuan Rd, Qingnian Rd, and Yinhe Rd. Two pump stations to be built, one at the crossing of Yinhe Rd and Shangzhong Rd, the other at the crossing of Qingnian Rd and Shangzhong Rd.
Advantages	<ul style="list-style-type: none"> · Sewer collection trunk pipelines along Binhe Rd east of Shangzhong River may stop all sewage from entering and polluting the River. · The landscape of Shanghe County is sloping from the higher east to the lower west, so that the sewer pipelines running east-west agree with the natural incline of landscape and may save excavation depth and installation cost. 	<ul style="list-style-type: none"> · Shangzhong Rd is a main street in urban Shanghe, with major industries located on either side. This makes it easier to collect wastewater at the shortest distance. · The landscape of Shanghe County is sloping from the higher east to the lower west, so that the sewer pipelines running east-west agree with the natural incline of landscape and may save excavation depth and installation cost.
Disadvantages	More branch pipelines needed.	<ul style="list-style-type: none"> · As a busy thoroughfare in the urban area, the street is lined with many business firms. The pipeline installation will involve a lot of house demolition and displacement. · The scheme cannot stop some of the sewer water that are now directly discharged into the river. · Some of the pipelines may have to be laid against the natural incline of the landscape.

Source: documented from *Project Feasibility Study Report* (April 2005)

2.2 Project impact of land acquisition

24. On considerations of the above-mentioned comparison, the WTP is designed to be located at Tongjiadaokou Village, which is under Shanghe Township of Shanghe County, and Zhanglaozhuang Village of Zhangfan subtownship. It is planned to make a permanent land acquisition of 65 mu, including, specifically, 63 mu of farmland and 2 mu of ditch and canal ground (24 mu from Tongjiadaokou Village and 41 mu from

Zhanglaozhuang Village). The pipeline network is equipped with two pump stations, which require 3,300 square meters (4.95 mu) of land for permanent use. The sites are already situated within the collective land area designated as the planned urban land zone., Details of land acquisition are listed in Table 3.

Table 3 List of project land acquisition

Unit of numbers: mu /household(s) /person(s)

Item	Name of Area	Farmland	Vegetable land	Others	Sum	Number of Household s Affected	Number of Persons Affected
WTP	Tongjiadaokou Village, Shanghe Township	23	0	1	24	36	161
	Zhanglaozhuang Village, Zhangfang Subtownship	40	0	1	41	10	45
	<i>Sum</i>	63	0	2	65	46	206
Pump Station No. 1	Xisanli Village of Shanghe Township	2	0	0.4	2.4	6	39
Pump Station No. 2	Beiguan Village of Shanghe Township		0	2.55	2.55	0	0
	<i>Sum</i>	2	0	2.95	4.95	6	39
Total		65	0	4.95	69.95	52	245

Source: Report on Land Acquisition Impact, Shandong University 2004, IA of Shanghe 2005.

25. At present, there is no building or other artificial structure on the land for acquisition, involving no adverse impact of resettlement or displacement. The position of land for acquisition and conditions of standing crops are shown in the photo below:



26. It is planned to lay 20.96 km of new pipelines for wastewater collection and 0.5 km of outlet pipelines for the WTP to discharge treated water. The construction project is estimated to temporarily occupy 68,672 m² (103 mu) of urban street area and some section of river course. The design of sewage pipe network is also based on both the existing and proposed pipeline network of Shanghe County. The new trunk sewer pipelines will be laid along the slow lane or shoulders of the urban roads in addition to existing pipes. The WTP inlet trunk pipeline for sewage collection will be laid along natural river course to keep away from villages or houses. Still, the construction of 17.06 km of pipelines may cause some slight impact, but that may be minimized by means of using flexible construction methods, providing necessary traffic signs, opening temporary passageways, spraying water to reduce dust, and erecting safety screens. The 13 business firms (involving 69 persons) that are likely to be affected are listed in Table 4.

Table 4 Project impact caused by temporary land occupation

Type of pipelines	Degree of impact level	Length of pipe (m)	Residence		Shops		Mitigation measure ^[1]
			household s	No. of APs	No. of Shops	No. of APs	
1. New pipeline to be laid along with construction of newly planned roads	None	3,900	-	-	-	-	-
2. New pipeline to be laid at roadside without widening street or resettlement	Slight	17,060	0	0	13	69	1
Total		20,960	0	0	0	69	

^[1]Note: Mitigation measure: (1) needs only engineering and environmental measures; (2) besides measure (1), needs publicity and coordination, but no economic compensation; and (3), besides measure (2), needs appropriate or small amount of economic compensation.

Source: Site visits by Shanghe County IA, April 30, 2005.

2.3 Population Affected

27. During Dec. 9 -10, 2004, the Development and Reform Commission and the Construction Bureau of Shanghe County, together with the resettlement survey team of Shandong University, conducted a survey to the project-affected villagers. The affected population consists of 161 persons of 36 households in Tongjiadaokou Village of Shanghe Township, and 45 persons of 10 households in Zhanglaozhuang Village of Zhangfang Subtownship. The sum of directly affected APs amount to 206 people of 46 households.

28. The permanent land acquisition for the two pump stations covers 4.95 mu of land belonging to two villages. The land of Xisanli Village involves 39 persons of 6 households, but the land of Beiguan Village is barren land (unused) under collective title and does not affect any individual households.

29. In summary, the permanent land acquisition for the WTP project will 245 persons of 52 households.

30. The pipeline construction for the WTP does not involve any resettlement and affects two households that informally farm the river course. Also, indirect impacts of the project include 69 persons of 13 business firms which will face some temporary disturbances during construction. None of these units or households will be seriously affected.

III. Social Economic Characteristics

3.1 Socio-economic situation of Shanghe County

31. Shanghe county is one of the ten administrative counties/districts under the municipal government of Jinan, serving as the northern gateway of Jinan city. Geographically, Shanghe borders on Huimin county and Yangxin county of Binzhou to the east, on Linyi county of Dezhou to its west, on Jiyang county to the south and on Laoling city of Dezhou to the north. With a population of 600,000 and a total terrain of 1,162 square kilometers, Shanghe county consists of 947 administrative villages and 15 residential committees under the administration of 7 townships and 14 subtownships. The urban area of the county is situated at the center westwards, serving as the seat of the county government, the local political, economic and cultural center and a regional pivot of communications.

32. The terrain of Shanghe county is made up of the alluvial deposit of the Yellow River silt, therefore the terrain consists of open level ground that slightly tilts from southwest to northeast. There are over ten rivers running across the county, namely, Tuhai, Tuma, Dehui, Shangxi, Shangzhong, Shangdong, and others. The rivers serve both for irrigation water source and for flood water discharge. The whole county is under the influence of a temperate humid monsoon climate, with an annual average temperature of 13.6 °C and annual precipitation of 591.1 mm. The region enjoys a frost-free period of 193 days a year, with the rainy season at summer, favorable for grain crops and cotton growing.

33. Shanghe county witnesses a rapid development of its economy. Its regional GDP of 2003 reached 5,140 million yuan, with a growth rate of 13%. Of this figure, the contribution from the primary (agriculture), secondary (industry) and tertiary (service) industries respectively stands at 1,700 million yuan, 2,120 million, and 1,320 million yuan, growing respectively at 9.7%, 25.5% and 10.2% over previous periods.

3.2 Socio-economic situation of Affected Towns and Villages

3.2.1 Shanghe Township

34. Shanghe Township is situated in the urban area of the county. The area of the township extends 57.7 square kilometers with arable land of 42,000 mu. Under the township government are 3 administrative offices (Shangcheng, Liuwanzhi and Maguanzhai), 41 villages and 15 residential committees, with a total population of 35,000,

including 21,000 rural population. Shanghe Township enjoys convenient transport facilities with the No.316 provincial highway and No.248 highway traversing its terrain and Jinan International Airport only 80 km away. The town is rich in oil and 38 oil wells are in production. Shanghe township is famous for its drum production and performance. On the 50th Anniversary of the founding of P.R.C, it sent a drum and dance team to join the celebration performances in Beijing. Since then, a professional performance team has been organized to take part in various performances or competitions in delegation of their county, city or even Shandong Province.

35. The regional GDP of 2003 reached 680 million yuan, increasing 88 million yuan over the previous year with a growth rate of 14.87%. Of the figure, the contribution from the primary, secondary and tertiary industries stands respectively at 120 million, 380 million and 180 million yuan, increasing respectively at 62%, 4.3% and 13% over same periods of previous year. The secondary and tertiary industries grow rapidly. iron knitting product, construction, and chemical engineering have become staple industries of the town. Most of the surplus agricultural labor force have found employment in the three industries and created new ways of increasing income. Agriculture is still confined to traditional crops, such as wheat, corn and cotton. Since the 1990s, adjustment in agricultural production has been speeded up, and production in fruit, vegetable and animal raising has grown considerably.

36. Per capita income of Shanghe Township in 2003 stood at about 3,500 yuan, with per capita net income for peasants being 2,800 yuan in 2003. The major source of income is by selling crops and domestic animals. Non-agricultural income mainly consists of business gains from the secondary and tertiary industries or labor payment from nearby enterprises in the urban area. In normal cases, agriculture contributes to about 30% of the total income while non-agricultural activities account for 70%.

3.2.2 Zhangfang Subtownship

37. Situated at about 5 km northwest of the city of Shanghe county, Zhangfang is a subtownship with 37.6 square km of terrain including 32,655 mu of arable land. Under the township government are 42 administrative villages and 5605 households. The total population at present stands at 23,000, including 828 on non-agricultural registration. Sex proportion between male and female of the population is 100 : 101.9. Township GDP is registered at 176 million yuan, of which the primary, secondary and tertiary industries respectively account for 68 million, 78 million and 30 million yuan. With a per capita regional GDP at 7,652 yuan, the town is comparatively under developed.

38. Agricultural production is comparatively traditional, mainly consisting of crops like wheat, corn and cotton. Farmland for crops measure 62,190 mu, including 42,870 mu for grain crops and 19,320 mu for other remunerative crops. Total output of grain crops is 16,011 ton per year and average output per mu is 373 kg. Since the agricultural restructuring in the 1990s, proportions in fruit, vegetable and animal raising and breeding

has grown considerably, with priority in fine-quality fruit trees, quick-growing timber wood, herbal plants for traditional Chinese medicine, fine-strained cotton, etc. In animal husbandry, there are in Zhangfang subtownship 20 places for animal raising and breeding, especially of cattle, sheep, pigs, and chicken, with annual output respectively at 5,000, 18,000, 19,000 and 53,000 (heads).

39. Per capita net income of Zhangfang Subtownship in 2003 stood at about 2,500 yuan. The major source of income for the villagers is from sales of crops and domestic animals. Non-agricultural income mainly consists of labor service for nearby enterprises in the urban area. In normal cases, agricultural and non-agricultural contributions each account for half of the total income

3.3 Socio-economic situation of affected villages

3.3.1 Tongjiadaokou Village of Shanghe Township

40. There are 453 people of 116 households in Tongjiadaokou village, with an active labor force of nearly 300 people. The village has a land possession of 910 mu, including 678 mu of arable land and per capita farmland of 1.5 mu. The village is divided into 4 teams, with per capita farmland ranging from 1.4 to 2.1 mu. The active labor force is mainly engaged in non-agricultural economy, i.e., working for nearby factories in the urban area. Old people and some of the women still work on the farm fields. Some villagers make their living by raising cattle, pigs and sheep. At present, cattle-raising is widespread, reaching an average figure of one cattle for every household. Crops mainly include grain and cotton. The villagers on the whole depend on agricultural production, working on temporary jobs for factories and employment in urban enterprises for an annual net income of 3,800 yuan per capita. 50% of the total income is from non-agricultural work, for example, there are about 140 villagers who have organized into 3 construction and stevedore teams. Also there are villagers who go to other places to find work. The basic socio-economic situation of Tongjiadaokou village is shown in Table 5.

3.3.2 Zhanglaozhuang Village of Zhangfang Township

41. There are 863 villagers of 260 households in Zhanglaozhuang village, which has about 1,800 mu land, including 1,400 arable land. Major crops consist of wheat, corn and cotton. As the village is adjacent to a national highway and has the advantage of convenient traveling, grownup villagers mainly engage in construction work, raising domestic animals or private businesses. There are nearly 300 people working on construction jobs, 15 households in cattle raising, and more than 100 in businesses. Per capita net income of 2003 was 3,500 yuan, with agricultural and non-agricultural income each contributing to 50%. The basic socio-economic conditions are shown in Table 5.

3.3.3 Xisanli Village of Shanghe Township

42. There are 1,081 people of 298 households in Xisanli village, including 500 people of active workforce. The village has over 930 mu of land, including 430 mu of arable land. The villagers are grouped into 3 teams, and per capita farmland possession is 0.4 mu. Most of the villagers engage in non-agricultural employment, working at urban or nearby factories. Some villagers work as taxi drivers, in construction teams, or in trade and services employments. The major crops are wheat and corn, but villagers mainly depend on non-agricultural work for their income. The per capita net income of 2003 was about 5,000 yuan, of which 90% came from non-agricultural returns. Detailed data of its socio-economic condition are shown in Table 5.

3.3.4 Beiguan Village of Shanghe Township

43. Beiguan village consists of 851 villagers in 204 households. About 400 of the villagers are active workforce. The village possesses over 240 mu of land, of which 40 mu are arable land. The village is divided into 4 teams. Most of the villagers are engaged in non-agricultural employments, such as taxi driver, construction, trades and services, etc. Agricultural crops consist of quick-growing poplar trees and remunerative fruit. The villagers mostly engage in trades and services at urban area, with a per capita net income of 6,000 a year, of which 98% comes from non-agricultural employments.

Table 5 Basic Socio-Economic Conditions of Affected Villages

Unit of figures: households/mu/yuan

Name of villages	No. of Households	No. of villagers	No. of workforce	Land size	Arable land size	Per capita arable land	Per capita net income	
							Agri-cultural	Non-agri-cultural
Tongjiadaokou (Shanghe Township)	116	453	300	910	678	1.5	1900	1900
Zhanglaozhuang (Zhangfang township)	260	863	480	1800	1400	1.6	1800	1700
Xisanli (Shanghe Township)	298	1081	500	930	430	0.4	500	4500
Beiguan (Shanghe Township)	204	851	400	240	40	0.05	120	5880

Source: Survey by Shandong University, 2004; Survey of Shandong Provincial Statistical Bureau, 2005.

3.4 Socio-economic situation of directly affected people

44. People directly affected by land acquisition are distributed in three of the four affected villages. Of the 245 directly affected APs, there are 161 people of 36 households in Tongjiadaokou village of Shanghe Township, 45 people of 10 households in Zhanglaozhuang village of Zhangfang subtownship, and 39 people of 6 households in Xisanli village. Detailed descriptions of these people will be given in the following sections in terms of gender, age, education, vocation, and income.

3.4.1 Gender Analysis

45. There are 161 directly affected APs in Tongjiadaokou village, accounting for 35.5% of the village population. Among them, 82 APs are male villagers, accounting for 50.9% of all APs and 18.1% of total village population; 79 are female, accounting for 49.1% of all APs and 17.4% of the total population. APs of the other two villages exhibit similar gender structures but much smaller number and percentage in the village population. See Table 6 for detail.

Table 6 Gender structure of directly affected APs

Name of village	Sex	Number of APs	Percentage in No. of APs	Percentage in No. of population
Tongjiadaokou (Shanghe Township)	Sum	161	100%	35.5%
	M.	82	50.9%	18.1%
	F.	79	49.1%	17.4%
Zhanglaozhuang (Zhangfang township)	Sum	45	100%	5.2%
	M.	23	51.2%	2.7%
	F.	22	48.9%	2.5%
Xisanli (Shanghe Township)	Sum	39	100%	3.6%
	M.	20	51.3%	1.85%
	F.	19	48.7%	1.76%
Total	Sum	245	100%	10.2%
	M.	125	51%	5.2%
	F.	120	49%	5.0%

3.4.2 Age Structure

46. Of the total directly affected people in Tongjiadaokou Village, there are 39 people below 18 years of age, accounting for 24.2% of the directly affected villagers; 20 people are aged at 60 or over, accounting for 12.4%; and 102 people are aged between 18 to 60, accounting for 2/3 of the APs. Of the last group, there are 69 villager aged between 18 and 45, accounting for 42.9%, and 33 villagers aged between 46 and 60, accounting for 20.5% of total APs. The age structure of directly affected APs in the other two villages is

slightly different from that of Tongjiadaokou, and generalizations are hard to draw since the number of affected persons is small. Detailed data are shown in Table 7.

Table 7 Age structure of directly affected people

Name of village	Age	Under 18	18-45	46-60	Over 60	Total
Tongjiadaokou (Shanghe Township)	No.	39	69	33	20	161
	Percent	24.2%	42.9%	20.5%	12.4%	100%
Zhanglaozhuang (Zhangfang township)	No.	10	17	12	6	45
	Percent	22.2%	37.8%	26.7%	13.3%	100%
Xisanli (Shanghe Township)	No.	6	18	9	6	39
	Percent	15.4%	46.2%	23%	15.4%	100%
Total	No.	55	104	54	32	245
	Percent	22.4%	42.4%	22.0%	13.2%	100%

3.4.3 Education background of APs

47. Among the people to be directly affected in Tongjiadaokou Village, there are 60 people with a junior middle school education background, a majority accounting for 37.5% of APs; 47 people with a primary education, accounting for 29.4%; while 43 villagers with a less-than-primary education, accounting for 26.3%. Apart from these, there are 10 villagers with a senior middle school education, accounting for 6.3% of APs, and then there is a college graduate. In Zhanglaozhuang village, most of the APs have had a less-than-primary education while fewer have had senior middle school education. In the economically well developed Xisanli village, however, the background education shows that most of the people staying at the village have had a primary education or less. The percentages are listed in Table 8.

Table 8 Education background of APs

Name of village	Education	Less than primary school	Primary school	Junior middle school	Senior middle school	college	Total
Tongjiadaokou (Shanghe Township)	No.	43	47	60	10	1	161
	Percent	26.3%	29.4%	37.5%	6.3%	0.6	100%
Zhanglao-zhuang (Zhangfang township)	No.	15	13	13	4		45
	Percent	33.3%	28.9%	28.9%	8.9%	0	100%
Xisanli (Shanghe Township)	No.	6	21	8	0	4	39
	Percent	15.4%	53.8%	20.5%	0%	10.3%	100%
Total	No.	64	81	81	14	5	245
	Percent	26.1%	33.1%	33.1%	5.7%	2.0%	100%

3.4.4 APs' Occupation structure

48. Among the people to be directly affected in Tongjiadaokou Village, 56 persons engage in farming, accounting for 34.7% of all APs, 30 persons are full-time students, accounting for 18.6%; 49 people engage in a kind of half-farmer-half-worker employment, accounting for 30%; 14 are migrant workers, accounting for 8.7%; and 11 are pre-school children. The situation of the other two villages is similar except that in Zhanglaozhuang village there are no half-farmer-half-worker APs, while in Xisanli village there are no migrant laborers or pre-school children among the directly affected villagers. See Table 9.

Table 9 Occupation structure of APs

Name of village	Occupation	Farming	Half Farming	Migrant worker	Students	Pre-school children	Total
Tongjiadaokou (Shanghe Township)	No.	56	49	14	30	12	161
	Percent	34.7%	30%	8.7%	18.6%	7.5%	100%
Zhanglaozhuang (Zhangfang township)	No.	20	0	17	6	2	45
	Percent	44%	0	39%	13%	4%	100%
Xisanli (Shanghe Township)	No.	15	17	0	7	0	39
	Percent	38.5%	43.6%	0	18%	0	100%
Total	No.	91	66	31	43	14	245
	Percent	37.1%	26.9%	12.7%	17.6%	5.7%	100%

3.4.5 Income situation and vulnerable groups

49. Data from the Statistical Bureau, from village committees and from villagers themselves show the income structure of the APs as follows: in Tongjiadaokou village roughly 50% of household income is derived from agriculture, and the rest comes from non-agricultural activities. The average annual net income of APs is 3,800 yuan per capita. In Zhanglaozhuang village of Zhangfang Subtownship roughly 50% of household income is derived from agriculture, and the other 50% comes from non-agricultural activities. The average annual net income of APs is 3,500 yuan per capita. In Xisanli village of Shanghe Township 4.8% of household income is derived from agriculture while 95.2% comes from non-agricultural activities. The average annual net income of APs is approximately 5,000 yuan per capita.

50. The income distribution shows that where their village is situated near urban areas and enjoys better economic development, the APs there have higher level of income than elsewhere. Of all the APs, only 3 people of 2 households are identified as poor and vulnerable members, owing to unemployment and chronic diseases. The 3 villagers will be given some extra assistance in addition to compensations for their land acquisition.

3.5 Land tenure and land distribution

51. The land to be acquired is now in collective possession of the villagers, who are divided into production teams. The village arable land (including cultivated land and land in fallow due to crop rotation, e.g., cropping every other year or once every three years) is commonly allocated in equal shares to all villagers, and that method of distribution has been accepted as tradition. No individual villager is found without land on the RP household survey. It is also found that both village heads and ordinary villagers consent to the practice in the future, because they believe that is the best way to show social justice and equality.

52. Redistribution of village arable land follows when any loss of such land occurs to any of the production teams. The redistribution is conducted on the basis of all land in the possession of the village, irrespective of the current individual ownership of land involved. Moreover, if the arable land to be lost is of one quality class (irrigated, dry, upland, slope land; or class 1, 2, 3, etc in the plain area), the redistribution is confined only to that class. For instance, the present land acquisition covers only one type of land, therefore the subsequent redistribution will only affect the same class of land. Such arrangement could ensure that each villager has the same share of farmland as any other member and the same conditions for livelihood.

3.6 Assessment of land acquisition impact

3.6.1 Permanent land acquisition for the WTP

53. Based on the survey data, the impacts for some directly affected persons are serious. To summarize, of the total 36 households in Tongjiadaokou Village, 6 households will lose 49% of their total cultivated land each, and the other 30 households will lose 8-10% of their cultivated land. In Zhanlaozhuang Village, 2 households will lose 100% and the other 7 households will lose 44-90% of their cultivated land. Such serious impacts from land acquisition will be mitigated by the prevailing practices of arable land redistribution in these project-affected villages. Accordingly, the impacts on all the villagers due to the land acquisition have been calculated and listed in Table 10. Again, there is no directly affected person in Beiguan Village of Shanghe Township as no farmland is involved. Xisanli village of Shanghe Township will lose 5 mu of farmland, equivalent to the allocated shares for 5 villagers. Since agricultural returns accounts for less than 5% of the total household income, the adverse impact of the land acquisition on the villagers' livelihood is insignificant. In Tongjiadaokou Village, the land size for acquisition is equivalent to 15 villagers' shares of farmland, and the impact on income is less than 2%. Land loss from the acquisition in Zhanglaozhuang village of Zhangfang subtownship is equivalent to the loss of 25 villagers' allocated shares, causing less than 1.5% of income impact.

54. To sum up, the 65 mu of land acquisition for the Shanghe WTP project involves a loss of 45 people's shares of allocated farmland in the affected villages, bringing less than 2% impact on income of villagers.

55. The rest of land for acquisition consists of ditches, canals or wasteland in the collective possession of the villages. No loss will be incurred in terms of assets or means of livelihood.

Table 10 Assessment of impact caused by land acquisition

Indicator	Formula of calculation	Tongjiadaokou	Zhanglaozhuang	Xisanli
(1) Total number of households (Households)	-	116	260	298
(2) Total population (person)	-	453	863	1081
(3) Total farmland (mu)	-	687	1400	430
(4) Aver. land before land acquisition (mu/capita)	(3)÷(2)	1.52	1.62	0.398
(5) Size of farmland for acquisition (mu)	-	23	40	2
(6) Average land after land acquisition (mu/capita)	[(3)-(5)]/(2)	1.47	1.58	0.396
(7) No. of people losing all farmland (persons)³	(5)÷(4)	15	25	5
(8) Farmland loss ratio (%)	(5)÷(3)	3.35%	2.86%	0.47%
(9) Ratio of net income loss due to farmland loss (%)	(8)*50%	1.67%	1.43%	-
	(8)*5%	-	-	0.23%

3.6.2 Impact caused by sewer pipeline construction

56. The trunk sewer pipeline network has been optimized during the design stage, and all pipelines will be laid along roadsides or water discharge canals, thus keeping from all villages and buildings. Construction of pipeline network will occupy 68,672 square meters of urban roads and river course. A flexible construction arrangement for the pipelines will be adopted: segment by segment, duration within one or two weeks for each segment. During construction, temporary passageways will be provided where necessary, and indication signs will be set up to minimize the adverse impacts (see Table 4). Pipeline construction in the river course will affect two households who have informally occupied some of the riverbed to grow wheat. They will be compensated only for the standing crops of 1.9 mu.

³ This is a theoretical calculation to demonstrate the degree of impact (it includes dependents).

3.7 Lessons from previous cases and implications to the RP

57. Problems are found with practices of previous land acquisition: (i) lower compensation standard (generally based on the lower compensation limit specified in the China Land Administration Law – 10 times the annual value of land yield); (ii) compensation and compensation alone; and (iii) with little attention to the economic rehabilitation of APs and its monitoring and evaluation. These three drawbacks are considered inconsistent with the ADB involuntary resettlement policies. However, this RP has been prepared and will be implemented in full accordance with ADB policies as well as the stipulations in No. 28 document of the State Council of China.

IV Legal and Policy Framework

4.1 Brief introduction

58. The People's Republic of China has established and put into force the laws, regulations, and legal procedures concerning population resettlement and compensations incurred by construction of infrastructure projects. All acts of land acquisition, resettlement compensation, and displacement due to the present project shall be implemented according to the related China laws, national and provincial regulations and local policies, with due respect to inclinations and proposals from APs, and at the same time meeting the requirement of ADB policy on involuntary resettlement.

59. Land acquisition, displacement and resettlement of affected population involved in the present WTP project shall be implemented in accordance with ADB policy and China's law and regulations.

60. The following ADB policies, China's Laws and regulations will be implemented during the Project land acquisition and resettlement.

- 1) *Policy on Involuntary Resettlement*, ADB, November, 1995,
- 2) *Resettlement Handbook—A Guide to Good Practice*, ADB, 1998,
- 3) *Gender Checklist: Resettlement*, ADB, February, 2003,
- 4) *Resettlement Operations Manual (OM Section F2)*, ADB, October 29, 2003,
- 5) *The Land Administration Law of P.R.C.* (Issued in 1998 and in effective as of January 1, 1999)
- 6) *The Urban Real Estate Administration Law of P.R.C* (July 5, 1994)
- 7) *The Rural Land Contract Law of P.R.C* (effective as of March 1, 2003)
- 8) *The Regulations on Petition Letters*, P.R.C State Council (in effective as of May 1, 2005)
- 9) *The Implementation Regulations on the P.R.C Land Administration Law* (in

- effective as of January 1, 1999)
- 10) *Interim Regulations on Granting and Transferring Land-Using-Right of State-Owned Land of the P.R.C* (May 19, 1990)
 - 11) *The Notice on the Further Reformation of the Land Administration by the State Council* (GF[2004] No.28), October 21, 2004
 - 12) *The Preliminary Examination and Administration Guidelines for the Land Use of Construction Projects*, by the P.R.C Ministry of Land and Resources (MLR) (passed on June 28, 2001 and revised on October 29, 2004)
 - 13) *The Circular on the Comments to Improve the Farmland Transfer and the Land Acquisition Approval Procedures*, by the P.R.C MLR (November 2, 2004)
 - 14) *A Catalog of Land Use Right Allocation*, by the P.R.C MLR (October 18, 2001)
 - 15) *Guidelines on Information Disclosure for Land Acquisition*, P.R.C MLR (October 22, 2001)
 - 16) *Guidelines on Public Hearings related to State-owned Land and Resources*, P.R.C MLR (Issued on January 9, 2004 and executed on May 1, 2004)
 - 17) *Guidelines on Improving the Institutions for Compensation and Resettlement of Land Acquisition*, (MLR [2004]No.238, November 3, 2004)
 - 18) *The Implementation Regulations of Shandong Province on the P.R.C Land Administration Law* (August 22, 1999)
 - 19) *The Circular of the General Office of Shandong Provincial Government on Adjusting the Annual Output Value and the Compensation Standard for Land Acquisition* (LZBF[2004]No.51, May 27, 2004)
 - 20) *The Implementation Comments of the Government of Shandong Province on Carrying out GF[2004]No.28 Document--Further Reformation of Land Administration* (LZF[2004]No.116, December 27, 2004)
 - 21) *The Approval on Adjusting the Annual Output Value of the Land for Acquisition and the Compensation Standards for the Attachments* (LJFF[1999]No.314, Executed on December 21, 1999)
 - 22) *The Operation Manual on the Open and Democratic Village Administration of Shandong Province* (LTZ[2004]No.13, August 24, 2004)

4.2 ADB Policies

61. ADB *Policy on Involuntary Resettlement* (1995) and *Resettlement Operations Manual* (OM Section F2) have already specified the 3 key elements of ADB involuntary resettlement policy: (i) compensation to replace loss in assets, means of livelihood, and income; (ii) providing assistance for relocation, including provision of relocation sites with appropriate facilities and services; and (iii) assistance for rehabilitation to achieve at least the same level of well-being with the project as without it. Some or all of these elements may be present in a project involving involuntary resettlement. For any ADB operation requiring involuntary resettlement, resettlement planning is an integral part of project design, to be dealt with from the earliest stages of the project cycle, taking into account the following basic principles:

- (1) **Involuntary resettlement should be avoided whenever feasible.**
- (2) **Where population displacement is unavoidable, adverse impact should be minimized by providing viable livelihood options.**
- (3) **Replacing what is lost.** If individuals or communities must lose all or part of their land, means of livelihood, or social support systems so that a project might proceed, they shall be compensated and assisted through replacement of land, housing, infrastructure, resources, income sources, and services, in cash or kind, so that their economic and social circumstances will be at least restored to the pre-project level. All compensation should be based on the value of replacement cost.
- (4) **Each involuntary resettlement should be designed and executed as part of a development project or program.** ADB and executing agencies or project sponsors shall assess, during project preparation, opportunities for affected people to share project benefits. The affected people need to be provided with sufficient resources and opportunities, plus deadline-bound rehabilitation action in coordination with the civil works, to reestablish their livelihood and homes as soon as possible,
- (5) **The affected people are to be fully informed and closely consulted.** Affected people are to be consulted on compensation and/or resettlement options, including relocation sites, and socioeconomic rehabilitation. Pertinent resettlement information is to be disclosed to the affected people at crucial times, and specific opportunities provided for them to participate in choosing planning and implementation options. Grievance redress mechanisms for affected people are to be established. Where adversely affected people are particularly vulnerable groups, resettlement planning decisions should be preceded by a public preparation phase to enhance their participation in negotiation, planning, and implementation.
- (6) **Social and cultural Institutions.** Current social and cultural institutions of the affected people, and, where applicable, of their host areas, are to be protected and supported. Affected people are to be assisted to integrate economically and socially into host communities so that adverse impacts on the host communities are minimized and social harmony is promoted.
- (7) **Concerning APs without officially recognized titles.** Indigenous groups, ethnic minorities, pastoral nomads, people who claim for such land without formal legal rights, and others who may have usufruct or customary rights to the affected land or other resources, often have no formal legal title to their lands. The absence of a formal legal title to land does not constitute a barrier to ADB policy entitlements.

- (8) **Identification.** It is advisable to identify and record affected people as early as possible, preferably at the project confirmation stage, in order to establish their eligibility through a census or population registration that serves as records of eligibility before a deadline date. That may help to prevent a subsequent influx of encroachers or others who wish to take advantage of such benefits.
- (9) **The most impoverished.** Particular attention must be paid to the needs of the poorest APs and other vulnerable groups that have a high risk of impoverishment. This may include those without legal title to land or other assets, households headed by single or divorced females, the elderly, the disabled, sick and other vulnerable groups, particularly indigenous peoples. Appropriate assistance must be provided to help them improve their socio-economic status.
- (10) **The full resettlement cost should be included in the presentation of project costs and benefits.** This includes costs of compensation, relocation and rehabilitation. Social preparation and livelihood rehabilitation programs as well as the incremental benefits over the without-project situation (which are to be included in the presentation of project costs and benefits). The budget should also include cost for planning, management, supervision, monitoring and evaluation, land taxes, land fees, and other contingencies.

4.3 China Laws and Regulations

62. As far as the present project is concerned, there are two laws of China at present that can serve as its legal basis, namely, the *Land Administration Law* of the P.R.C (effective as of January 1, 1999) and the *P.R.C. Urban Real Estate Administration Law* (July 5, 1994). Relevant rules and regulations that are related to them are listed in Section 4.1. For an easy access, the immediately relevant clauses of the laws, regulations and policies have been excerpted in Table 11.

63. Apart from these, China's State Council issued on October 21, 2004 *The Notice on Further Reforms of the Land Administration by the State Council*, shortened as the GF [2004] Document No.28, in which compensation and resettlement measures for land acquisition were further clarified. Following this document, China's MLR issued the *Guidelines on Improving the Institutions for Compensation and Resettlement of Land Acquisition*, (abbreviated as the MLR Document No. 238). Meanwhile, Shandong Province also issued related documents. All these policies have provided essential guidelines for the RP. Specific key clauses are listed in Table 12.

Table 11 Excerption of relevant laws, regulations and policies

Content	Description of Clauses	Index
1 Basic land system	The state applies, 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 law.	Article 2, Land Administration Law
2 Procedures for processing the land use for construction projects	If a construction project needs land, which is the state-owned construction land under the urban Master Plan for a local city/county town, it will go through the following procedures: 1) During feasibility examination, the land administration department will examine the proceedings related to the land for the construction project, and write out a preliminary examination report, which is the necessary document for the FS report approval. 2) The construction unit, with relevant approved documents, will apply for the land used for the project from the land and resources bureaux (LRB) at city or county government. LRB will conduct an examination on the document and prepare a land provision plan, then submit to city or county government for approval. If higher level government approval is needed, it should apply. 3) After a land provision plan is approved, the construction unit can get a permission letter for using the land from local city or county government.For the allocation of state-owned land, the LRB of local government will issue a decision letter to the land user for allocation of state-owned land. 4) The land user will have the land registered according to the law. If the construction project will use the state-owned or unused land which have already been covered by the local master land use plan, then the following procedures will apply: To be approved by the local county (or county level city) government if in an area of 2 hectares or less, to be approved by the city government if in an area of 2-8 hectares, to be approved by the provincial government if in an area of more than 8 hectares.	Article 22 of Implementation Regulations to the Land Administration Law Article 24 of Implementation Regulation of Shandong Province (SP) on Land Law
3 Allocation of land use right	The allocation of land use right means that with the approval from county or above level government based on the law, the land is transferred to a land user after the user paid the compensation, resettlement cost, etc., or transferred to a land user free of charge. If a land use right belongs to allocation, there is no limit in term of duration except it has been prescribed in the law and regulations.	Article 22 of Administration Law of Urban Real Estate
4 Legal base for land use right allocation of this project	If it is necessary that land should be used for the urban infrastructure facilities or public interest purposes, the land use right can be approved for allocation by county or above level government in accordance with the law. Allocation of land use right cannot be allowed unless the land is in conformity with this category of construction projects, with the application of construction unit and approved by the county or above level government.....(III) Land to be used for urban infrastructure facilities ... 5. Environmental and sanitation facilities: including rainwater treatment facilities, wastewater treatment plant, rubbish/(manure) treatment facilities, and other environment and sanitation facilities.	Article 23 of Administration Law of Urban Real Estate; Category of Land to be Allocated
5 Regaining the land use right of state-owned	If for the public interests, the local land administration department can report it to the original government or the government with an approval right and then, take back the land using-right. If compensation is needed for taking back the land use right of state-owned land, appropriate compensation should be paid for the original land user. If the original land user needs relocation, the construction unit should be responsible for it. Compensation for taking back state-owned land should be implemented based on agreement. Before the approval of the construction project, the pre-examination should be completed, otherwise it is not allowed to approve the agricultural land transfer, land acquisition and land use permission.	Article 58 of the Land Law Article 30, Shandong Implementation regulation of Land Law
6 Temporary land use	If needing a state-owned or collective land for the construction project, it is possible to go through a series of procedure according to Article 57 of Land Law and to compensate for the land. In case of the temporary land in the planned area, it is essential to pay it at the price of the local land using-right.	Articles 38 & 39 of Implem. Regulation of SP on Land Law

Table 12GF [2004] Document No. 28 and implementation measures of project

GF [2004] Doc. No. 28 Section (III), Improvement of institutions on compensation and resettlement for land acquisition		MLR Doc. No.238 Articles	SPG LZF[2004] Doc. No.116 The General Office of LZF[2004] Document No. 54	Measures to be implemented by this project
Article 12: Improving land acquisition compensation practice	<ul style="list-style-type: none"> ·People's Governments at the county level and above shall adopt practical measures to ensure that the farmers whose land is acquired shall not be made worse off. Ensure that compensations due to land loss shall be paid in accordance with the law and regulations in full and in time. ·Provincial level government shall formulate and publicize the AAOV in uniform amount or comprehensive land price for each city/ county, and the compensation should be uniform within the same type of land. The full costs of land acquisition for national key development projects shall be included in the overall project budget. 	<ol style="list-style-type: none"> 1.Formulate AAOV in uniform amount. 2.Formulate the AAOV multiplier in uniform amount. 3.Formulate the comprehensive land price in the urban area. 	<ul style="list-style-type: none"> ·Put minimum limit of AAOV. AAOV of cultivated land in planned urban area: 1800 Yuan/mu, 1600 Yuan/mu, 1400 Yuan/mu and 1200 Yuan/mu for classes I, II, III, and IV areas respectively; and minimum 1000 Yuan/mu for the land outside of the planned urban area for the whole province. The sum of the AAOV multipliers for land compensation fee and resettlement subsidy shall not be lower than 16 times ·The full costs related to land acquisition for various construction projects shall be included in the overall project budget. 	<ul style="list-style-type: none"> ·The RP has been prepared strictly according to relevant national and SPG regulations; ·AAOV and comprehensive land price follow SPG prescription; ·The minimum AAOV multiplier is 16 times ·All costs related to land acquisition have been included in the Project budget
Article 13: Resettle the land loss farmers properly	<ul style="list-style-type: none"> ·County level and above government should specify detailed measures to secure APs' long-term livelihood. ·Within the planned urban area, local governments shall bring the land-loss farmers caused by land acquisition into urban employment system, and establish social security system; outside of the planned urban area, local government shall reserve necessary cultivated land in its administrative jurisdiction for the land-loss farmers when land acquisition occurs, or corresponding jobs will be provided for them. 	<ol style="list-style-type: none"> 5.Resettlement in agriculture. 6.Find other jobs. 7.Become a shareholder of the Project. 8.Resettlement as migrants in other places. 	<ul style="list-style-type: none"> · Under the same condition of competent skills, the Project construction unit shall give priority of employment to APs. (other contents are the same as documented in Document No.28) 	<ul style="list-style-type: none"> ·Reserve enough cultivated land in the collective organizations ·When the project recruits employees, under the same condition of competent skills, the Project construction unit will give priority of employment to the APs. ·Conduct skill training for APs
Article 14: Improve land acquisition procedure	<ul style="list-style-type: none"> ·(reaffirm relevant MLR regulations) ·Documentation on information disclosure to and confirmed by the farmers whose land is to be requisitioned should be treated as an integral part of the materials submitted for the approval of land acquisition. 	<ol style="list-style-type: none"> 9.Inform APs on land acquisition 10.Confirm DMS results. 11.Organize public hearings 	<ul style="list-style-type: none"> ·Before the approval of land acquisition based on the law, farmers whose land will be requisitioned shall be informed in written form on the utilization, location, compensation standards of the land to be lost and the resettlement options. The results of the DMS on the land to be acquired shall be verified by the rural collective and the farmers concerned. If necessary, the land resource department shall organize public hearings 	<ul style="list-style-type: none"> ·Distribute RIB or the whole RP to affected farmer households (in written form) ·If necessary, local LRB will organize public hearings ·Affected farmers confirm DMS result.
Article 15: Strengthen supervision and management of the land acquisition process	<ul style="list-style-type: none"> ·In case the resettlement of land acquisition has not been carried out, use of the acquired land is not allowed. ·Provincial government shall formulate the internal distribution options of the land compensation within the collective organization based on the principle that most of the compensation should be used for farmer households whose land has been requisitioned. ·The rural collective organization shall make the information on the revenues and allocation of the land compensation fund publicized to and supervised by its members ·The agriculture, civil affairs and other departments shall strengthen the supervision over the distribution and use of the compensation fund within the rural collectives . 	<ol style="list-style-type: none"> 12.Disclose approval proceedings of land acquisition. 4.Distribution of compensation fund 14.Supervision and inspection after land acquisition. 	<ul style="list-style-type: none"> ·The supervision and management of land acquisition process shall be strengthened in order to ensure that the compensation has been paid in full amount and in time. In case the resettlement of land acquisition has not been carried out, use of the acquired land is not allowed ·Provincial agricultural department in association with other relevant departments shall formulate an implementation guideline for the distribution and utilization of compensation fund within the rural collective organizations, which will be implemented upon SPG approval. And the supervision and management for the distribution and utilization of compensation fund shall be strengthened. 	<ul style="list-style-type: none"> ·Through internal and external monitoring to ensure land compensation be paid in full amount and in time. ·Compensation distribution will be decided by villagers during villagers meeting prescribed in the open village affair management system. ·Besides Project internal and external monitoring, it will be supervised by the bureaux of LR, agriculture, civil affairs.

4.3 Project compensation and resettlement policies

64. The formulation of policies on the compensation for and resettlement of APs is based on the policies and requirements of ADB and the P.R.C rules, regulations and laws. The priority target of the resettlement program is to ensure that APs' income and living standard after resettlement will be rehabilitated as quick as possible or at least maintained at the level of "without-project" status, and the adverse socio-economic and environmental impacts caused to APs will be minimized. The preparation of RP and its implementation are focused on this target. The poor, ethnic minorities and vulnerable groups need special concern. In addition, the Project site selection during FS stage had considered the needs of avoiding involuntary resettlement.

65. The resettlement principles adopted by the Project reflect the legal and policy requirements of PRC and ADB. The principles are summarized in Table 13. The adopted principles with regard to compensation, resettlement and income restoration are flexible enough, allowing for considerable variability from village to village (e.g., between land redistribution and cash payments on the one hand, and community-based and individually organized income restoration options on the other). The aim is to ensure that all APs receive adequate compensation and assistance to restore and improve their incomes, living conditions and general livelihood in post-resettlement period.

Table 13 Project resettlement principles—Summary

No.	Principles
1	That compensation and entitlements provided to APs are adequate to at least maintain their "without project" standard of living.
2	All APs, titled or non-titled, are taken into account for compensation and resettlement assistance.
3	Land redistribution will ensure per capita minimum holding in post-resettlement period to maintain livelihood standards.
4	Where per capita farmland holding after acquisition is not sufficient to maintain livelihood, compensation will be provided in cash or in kind or other income-generating activities.
5	All APs will be adequately informed on eligibility, compensation rates and standards, livelihood and income restoration plans, project timing, and will be involved in RP implementation.
6	No land acquisition will take place unless replacement land or sufficient compensation are given to APs.
7	The EA and independent/third party will monitor compensation and resettlement operations.
8	Vulnerable groups should receive special assistance or treatment to ensure their livelihood. APs documented in the RP should have opportunities to benefit from the Project.
9	Resettlement plan should be combined with the overall county/city/district or township planning.
10	RP budget should be adequate and cover all conceivable aspects.

4.4 Compensation standards for various losses

66. Losses caused to villages and villagers by the Project are to be mitigated with different compensation standards, mainly covering the following aspects:

4.4.1 Compensation for permanent land acquisition

67. In accordance with the *Implementation Regulations of Shandong Province on the P.R.C Land Administration Law* and the *Circular of the General Office of SPG on Adjusting the AAOV and the Compensation Standard for Land Acquisition*, the land of Shanghe County belongs to Class IV land in Shandong Province, so its AAOV is defined as 1,200 Yuan /mu. Calculated at 10-times AAOV for the land compensation fee, and at 11-times AAOV for the resettlement subsidy fee, the compensation standard for the land loss has been rated at 25,200 Yuan/mu. Refer to Table 14.

Table 14 Compensation standards for permanent land loss

AAOV (Yuan/mu)	Multiple for land compensation fee (times)	Multiple for resettlement subsidy (times)	Total multiple (times)	Compensation standards (Yuan/mu)
(1)	(2)	(3)	(4)=(2) + (3)	(5)=(1) x (4)
1,200	10	11	21	25,200

68. Compensation for land of the two pump stations is rated on urban area standards. According to stipulations of Shanghe LRB, the compensation standards for the land acquisition is rated at 40,000 Yuan/mu.

4.4.2 Compensation for young crops

69. In accordance with Article 27 of the *SPG Regulations on Implementing the P.R.C Land Administration Law*, compensation for young crops is calculated on the output value of one harvest. However, the land to be acquired (in Shanghe) yields two harvests a year, the compensation standard is accordingly rated at half of the farmland AAOV, namely, 600 yuan/mu.

4.4.3 Compensation for temporary land occupation

70. In accordance with Article 39 of the *SPG Regulations on Implementing the P.R.C Land Administration Law*, compensation for temporary occupation of land within planned urban area for construction shall be calculated on the price of land-use right of corresponding years and periods; for temporary occupation of farmland, compensation is to be calculated on the AAOV of the past 3 years; and for temporary occupation of unused land the compensation rate should be calculated at 30% of the compensation rate for which the local

average cultivated farmland occupied.

71. Accordingly, compensation for damage to urban roads is rated at 35 yuan/m² for road restoration, to be paid to the Construction Bureau of Shanghe County; compensation for occupation of river courses is rated at 30% of the 1,200 standard, i.e., 400 Yuan/mu, to be paid to the its possessor– Water Resources Management Bureau of Shanghe County for post-project restoration.

4.5 Eligibility and entitlement of the Project

72. Table 15 describes the eligibility and entitlement for the Project-related compensations.

Table 15 Project entitlement matrix

Type of loss	Degree of impact	Entitled persons	Compensation policy/standards	Implementation issues
Permanent land acquisition for WTP (206 persons of 46 households,)	Permanent acquisition of collective land 65 mu, including farmland 63 mu, ditches and roads 2 mu; of which 23 mu of farmland and 1 mu of canal land in Tongjiadaokou village; 40 mu of farmland and 1 mu of canal land in Zhanglaozhuang village.	All APs who use the land before the specified deadline. Land compensation fee and resettlement subsidies will be paid to village collective, and compensation for standing crops will be paid to individual APs.	Compensation for farmland is rated at 25,200 yuan/mu (including land compensation fee and resettlement subsidies). Compensation for standing crop is rated at 600 yuan/mu.	Village meetings to be responsible for deciding on the allocation of funds, the redistribution of land and supervised by upper level government.
Permanent land acquisition for pump stations (39 persons of 6 households,)	Acquisition of collective land 4.95 mu, including farmland 2 mu, others 2.95 mu; of which 2 mu of farmland and 0.4 mu of canal land in Xisanli village; 2.55 mu of vacant land in Beiguan village.	All APs who use the land before the specified deadline. Land compensation fee and resettlement subsidies will be paid to village collective, and compensation for standing crops will be paid to individual APs.	Compensation for farmland is rated at 40,000 yuan/mu (including land compensation fee and resettlement subsidies). Compensation for standing crop is rated at 600 yuan/mu.	EA will encourage contractors to conduct the works in night time, segment by segment; and the local Construction Bureau will recover the roads in time
Temporary land occupation (12 persons of 2 households)	Temporary land occupation 103 mu, including 1.9 mu farmland on riverbed, and the rest being state-owned land.	No economic compensation for state-owned land. Villagers informally using river course.	Compensation for villagers at 500 Yuan/mu.	
Infrastructure (13 business firms)	15.95 km of roads and 5 km of river course	Administration dept. of roads and rivers	Compensation for roads at 35 yuan/m ² ; for river course at 10,000 yuan/5 km	
Income rehabilitation measures (details see Income Rehabilitation Section)		APs directly affected by permanent land acquisition	Skill training provided by relevant dept. sponsored by Project IA	Compensation should be used for investment in the purpose of rehabilitating their livelihood and income levels.
	All APs	All APs	Land compensation fees	

Type of loss	Degree of impact	Entitled persons	Compensation policy/standards	Implementation issues
	Subsidies for skill training	APs with land and income loss. For those who lose farmland, training opportunities will be provided to increase production and improve living standards.	The Project IA unit provides 10,000 yuan for training subsidy.	The IA will coordinate to have relevant departments to conduct the training and provide assistance to APs for jobs
	Employment opportunities of non-agricultural activities	APs affected by permanent land acquisition	Coordination between Project construction unit and related agencies. Reciprocal choice.	

V Procedures for Participation, Consultation and Grievance Redress

5.1 General

73. In accordance with the ADB resettlement policies and relevant laws and regulations of China, it is necessary to encourage the public participation and consultation during RP formulation and implementation for Project related land acquisition and relocation, and the comments and suggestions from APs should be collected and incorporated into the RP. The Project FS decided to acquire 65 mu farmland for the WTP construction site according to the overall urban planning of Shanghe county government. Since the land to be acquired is not large, the land acquisition will be relatively simple.

74. Although the land acquisition is simple, the Planning Bureau and Environmental Protection Bureau of Shanghe County have conducted since June 2004 a series of investigations and consultations with respect to affected villages and APs in order to make known to all APs the land compensation standard and scope. These activities were conducted based on ADB policies and principles under the technical support of Shandong Project Office, CDM Company and the related land acquisition and resettlement agencies.

5.2 Participation during project preparation

75. During project preparation stage, based on the project design principles, the foremost consideration is to minimize resettlement land acquisition size. And during the preparation stage, Shandong Engineering Consultation Academy, the resettlement team of Shandong University and PPTA consultants conducted in-depth consultation on project land acquisition and resettlement. For detailed number of persons and issues discussed, refer to Table 16.

Table 16 Record of participation and consultation by interested persons

Unit	Date	Participants	No. of people	Purpose	Feedback/major issues or concerns
Shangdong Engineering Consultation Academy	May, 2004	Farmer, village leader, local government officials	20	FS preparation and field survey	<ul style="list-style-type: none"> Meeting with heads of local government and relevant departments (about 20 people) to learn about technical standard and purpose. When selecting pipe network layout, keep away from villages and buildings if possible in order to avoid or minimize resettlement. In site selection, try to avoid or acquire less farmland
Shandong University	June-Dec., 2004	Township and county officials, APs	50	PPTA RP socio-economic survey	<ul style="list-style-type: none"> Support project and assist in surveys Villagers expressed supporting attitude for Project, Collected socioeconomic data from the affected area.
Local govt. and RP consultants	Jan. – Mar. 2005	County officials, affected enterprises	10	Preparation for income rehabilitation	<ul style="list-style-type: none"> IA deputy county magistrate coordinated meeting, the Planning Commission, LRB, other related institutions and consultants proposed compensation options. The meeting showed overwhelming support for the project. Local officials introduced the economic development prospect after project completion. Local land redistribution practice, land redistribution after land acquisition widely accepted.
Shandong Statistical Service Center	Mar. 2005	Village cadres, affected farmers	150	RP socio-economic survey	<ul style="list-style-type: none"> discuss different compensation options/ land redistribution, advantages and disadvantages local officials introduced the economic development prospect after project completion need to formulate an appropriate compensation plan so that APs can rehabilitate livelihood. farmers proposed options for income rehabilitation
Disclosure of RP (draft)	Apr. 8, 2005	IA, relevant institutions	5	Distribution of draft RP in Chinese for comments	<ul style="list-style-type: none"> affirming RP to be in line with national policies on land acquisition in full aspects. compensation standards examined and confirmed affirming land compensation having been paid in full to APs
Distribution of RP(draft)	Mar. 14, 2005	All APs	65	Information disclosure and seeking feedback	<ul style="list-style-type: none"> basically agreeing to compensation standards in RP (draft) suggesting that the scope and rehabilitation measures be clarified for temporary land occupation suggesting arrangement for APs to work in WTP as temporary workers
ADB resettlement Specialist, PPTA Consultant	28 July 2005	IA officials	3	Training on resettlement planning and implementation, Endorsement of RP	<ul style="list-style-type: none"> SPPMO official (Mr. Zhang Yuzhao) introduced the importance of project resettlement following Chinese regulations and policies; ADB resettlement specialist (Mr. Zhu Wenlong) gave a lecture on RP preparation at different project processing stages and experiences on project RP implementation; Further discussion on the rehabilitation plan of APs such as safeguard measures of re-employment and income restoration to be provided for APs; County deputy magistrates/ Deputy mayor endorsed the RP.
Total			303		

76. The feedback of the meetings and surveys are essential to the formulation of resettlement policy in this RP, particularly for the formulation of compensation rate, land redistribution, direct compensation to APs, and the training plan and income rehabilitation strategies.

5.3 Participation plan

77. Although several public consultations have been conducted, the project EA and local government have recognized that it is necessary to arrange more consultation meetings after PPTA and during the RP implementation so as to minimize the adverse impacts caused by land acquisition. The major activities to be conducted are as follows:

- To further consult with the APs on the project and its compensation and resettlement plan.
- To conduct detailed measurement survey (DMS) with APs on the land and assets affected including temporary land occupation, so as to reach an agreement.
- To establish a mechanism for grievance redress and information disclosure.

78. Table 17 includes a consultation plan with time frame and activities to be carried out.

Table 17 Public consultation plan

Purpose	Task	Time	Implementation institutions	Participants	Remark
1. Finalization of village economic rehabilitation plan and its implementation	Village meetings (several rounds on RP implementation)	After Sept. 2005	County/City/District and township officials, village leaders	All APs	discuss and decide how to use/invest fund of collectively owned part of compensation
2. Establish grievance redress and information disclosure mechanism	Posters, leaflet, etc.	Sept. 2004	IA, county/ City/District resettlement staff, local officials	All APs	(i) inform APs on grievance redress procedures; (ii) establish grievance redress system, and (iii) propaganda campaign in affected villages
3. Conduct DMS, distribute updated RP based on DMS results	Face to face consultation with APs	Oct. 2005	EA, IA, resettlement staff	All APs	(i) Inventory of land and assets for acquisition; (ii) generating final roster of APs; (iii) preparing basic data for (signing) compensation contract with APs.

5.4 Grievance and complaint

79. If APs are not satisfied with the resettlement plan implementation or feeling treated unfairly, they can seek to resolve their problems through grievance and appeal procedures.

Generally, APs complaints derive from their dissatisfaction with the resettlement conducted by resettlement agencies, thus full consultation with the public is very important for the success of project implementation. Accordingly consultation should be encouraged so that policies and procedures for complaints documented in the resettlement plan will be fully understood by APs. The APs can lodge a complaint on any aspect of the resettlement, including compensation standards.

5.4.1 Reception of complaints

80. The APs can appeal to the local government and the project office in many ways, such as petition letters, telephone calls, etc. The government departments related to the project are respectively the Land Administration Bureau, the City Project Office, the Planning Bureau and Construction Bureau of Shanghe county. The specific appeal reception unit is the Construction Bureau of Shanghe County, phone number: 0531-4877259.

5.4.2 Grievance redress procedures

81. A revised version of the *Regulation on the Petition Letters and Visiting (xin fang tiao li)* issued by P.R.C State Council has been in effective since May 1, 2005. For a quick response to an appeal raised by APs, besides the appeal channels given in Chapter 2 of the Regulation, the following grievance redress procedures have been formulated. These procedures will be known by APs through public meetings or other information publication media so as to ensure that they can fully understand their entitlements and the grievance appeal mechanism.

- Any unit or person can express their grievances in oral or written form to the LRB of local county/district government, or the Project Office of Shanghe county. In case the appeal raised is not in written form, these two institutions should document the appeal and resolve the problems in 2 weeks.
- If APs are not satisfied with the results, they can go on to appeal to the Project Office of the city-level government. It should be deal with in 2 weeks.
- If still not satisfied with the decision from the City Project Office, APs can make an appeal to the LRB (land inspection and arbitration department) of the City, which should make a decision in 3 weeks.
- Again if not satisfied with the solution, the APs may appeal to the local people's court according to the Administrative Procedure Law. They can complain against any aspects related to the resettlement, including compensation standards.

VI Compensation, Resettlement and Income Rehabilitation

82. This project does not involve any buildings/structures, so there is no household relocation or related resettlement of APs. Based on previous practices, the village whose land is acquired will redistribute its remaining land evenly among its villagers according to its population. In this way, whether men or women, young or old, all villagers can get their share of land to maintain their livelihood. It is expected for the project to acquire 65 mu of cultivated land in 3 villages, and so land redistribution is quite feasible for rehabilitation of livelihood and income of APs.

6.1 Compensation for permanent land acquisition

83. The Project component involves a permanent land acquisition of 65 mu cultivated land for the WTP, and of 4.95 mu collective-owned land for 2 pump stations.

84. For permanent land acquisition, the land compensation fee and resettlement subsidies will be paid to the villages and the compensation for young crops will be paid to the affected households directly. In accordance with the relevant government policies and the *Opened and Democratic Management Regulations for Village Affairs in Shandong Province*, it has been decided after democratic discussions at village meetings that compensations for land and resettlement shall be paid completely to affected individual villagers.

6.2 Compensation for temporary land

85. The temporary land occupation refers to the roads in the urban area during the trunk sewer laying, covering 103 mu in all. According to the particular case of pipeline construction, the rehabilitation of affected urban road area will be measured by the project area. That is, compensation shall be calculated by the area of roads affected by the pipeline laying project at a rate of 35 yuan/m² for the 17 km pipeline network. Road restoration will be carried out by the county Construction Bureau. The remaining length of pipeline will affect 25 mu area of the river course, compensation for which will be made to the county Bureau of Water Resources Management at 400 yuan/mu for restoration.

86. Of the river course to be temporarily occupied, an area of 1.9 mu is now the unregistered farmland cultivated by nearby villagers. As it is not covered by the land-contract, they will be given once-and-for-all compensation at a moderate 500 yuan/mu which is equivalent to the market price for the harvested crops..

6.3 Livelihood rehabilitation plan

87. Although the impact on farmers caused by the project land acquisition is slight, several sets of income rehabilitation plans have been formulated as follows in order to have APs' income level restored and improved.

6.3.1 Land redistribution

88. After acquisition, the village committee will redistribute the remaining land according to the population in their villages rather than village groups, so that each AP would have new farmland. Accordingly, all villagers in Tongjiadaokou village including APs will have a per capita area of 1.5 mu farmland after the redistribution is carried out. The per capita land possession of Zhanglaozhuang villagers will be 1.6 mu. Through the balance of land redistribution, the average land loss for the villagers will be less than 3%, so that only very slight impact will ensue on their income (1% loss).

6.3.2 Cash compensation

89. According to the existing compensation plan, all land compensation and resettlement subsidy funds will be paid directly to affected villagers (including the host villagers that have their farmland redistributed, based on the total villagers in Table 5, each villager will get 1280 Yuan, 1168 Yuan in Tongjiadaokou Village and Zhanglaozhuang Village, or approximately 5000 Yuan and 3880 Yuan for each household, respectively.). The villagers could use the fund for the agriculture production, or as initiation fund for private industrial enterprises or other business. The APs may choose to find employment in the nearby enterprises or go to other places for a job.

90. After paying the cash to the APs, supervision for their economic rehabilitation plan and use of the money will be conducted by the project resettlement department, LRB and agricultural administration departments.

6.3.3 Education and skill training for APs

91. The project unit will provide a fund of 100,000 Yuan to support skill training for all villagers who loss farmland after land redistribution, particularly those directly affected laborers. Local agricultural and social labor security departments will be entrusted for technology training in intensive agriculture and non-agricultural skill training so that villagers may acquire necessary skills in non-agricultural work. Voluntary emigrant workers will receive assistance through information guidance.

6.3.4 Gender consideration during resettlement

92. The *Law of the Rural Land Contracting* stipules clearly equality of men and women

during contracting the land, i.e., it is not allowed to deprive women' right on land contracting. In the land redistribution practice of the villages affected, land has been allocated according to the population with no gender discrimination. Accordingly, during the land redistribution, employment and training, women will have the same right with men in this project. For the skills training scheme, women participation rate should be no less than 50%.

6.3.5 Support to vulnerable groups

93. Vulnerable groups will have priority for support from local government. For poor households with active labor force, the government will provide assistance by way of creating suitable remunerative activities or arranging income-generating opportunities related to the Project. For vulnerable groups who have lost future development abilities (concerning 3 people of 2 households, aged and physical infirmity), the government will entrust civil affairs administration departments to help relieve their difficulties. The Project will allocate 50,000 yuan for this purpose. Implementation of aiding vulnerable groups will be carried out by the Civil affairs administration Bureau.

6.4 Project related employment

94. After the WTP construction is completed, it will provide employment for 37 people. Under same circumstances, job priority will be given to the households who have lost land to provide employment opportunity for the affected villagers, whose living standard and income levels will thus turn for the better. After negotiations between affected village and project IA, two farmers from the APs will be recruited after completion of the WTP to work as temporary employees in the WTP to conduct gardening, cleaning work or as security guards.

95. During project implementation, APs nearby the WTP may engage in some jobs that do not require special skills, or engage in service work such as food preparation or vegetable supply, by which the affected households can get some cash income. With such arrangement, the villagers would receive benefits to offset any adverse effects caused by the Project; when combined with compensation and rehabilitation measures, APs' income levels would grow rather than decrease with the Project

6.5 Environment control

96. In case an environmental problem arises during land acquisition and resettlement, the local land acquisition and resettlement authority will be responsible for its solution. There is an environment control authority in the local government, any environment problems during land acquisition and resettlement will be dealt with by the authority. The Environment Impact Assessment Report for the project describes clearly the environment problems, resettlement measures and management mechanism of the project.

VII Institutional Arrangement

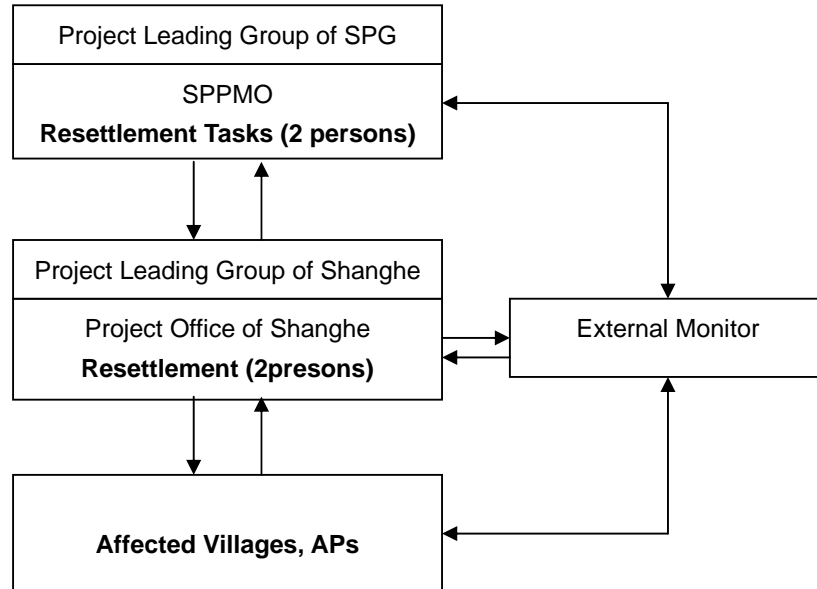
7.1 Organizational set-up

97. In order to implement the ADB financed Project, the major organizations established for the resettlement activity management, implementation and monitoring, are as follows:

- Shandong Provincial Project Management Office (SPPMO) of ADB financed Project;
- Project Office of Shanghe County (hereafter called as Project Office of Shanghe, which is established in the Construction Bureau of Shanghe County);
- The affected villages and APs

98. SPPMO will appoint two persons responsible for the land acquisition and resettlement. The Project Office in Shanghe County will designate at least two staff members to be exclusively responsible for specific tasks in land acquisition, compensation and resettlement. For details please refer to Chart 1.

Chart 1 Organizational set-up for Shanghe County WTP Project



99. The Shanghe County government has set up a Project Leading Group for the Project preparation and implementation coordination, headed by the Magistrate of Shanghe County, and leading members include department heads from the planning bureau, construction bureau, LRB, financial bureau, plus the civil affairs administration and social security bureau. Under the leading group, there is a standing office (i.e., Project Office),

which is located in the Construction Bureau of Shanghe County, responsible for project preparation, organization/coordination and management tasks.

100. During the project preparation and implementation, the Project Office will designate at least two staff members to be wholly responsible for land acquisition, resettlement and economic rehabilitation tasks. Meanwhile, it will appoint one township leader from affected township(s) as a part-time staff to assist in the above-mentioned tasks

7.2 Accountability of EA

7.2.1 SPPMO

101. As a higher-level coordination organization, SPPMO is responsible for the project preparation, resettlement and implementation and the inspection and evaluation during and after the project.

7.2.2 Project Office of Shanghe County

102. As the direct project construction management institution, its responsibility for land acquisition and resettlement is specified as followings:

- Participate in the formulation and review of RP;
- Organize public consultations, publicize the land acquisition and resettlement policies,
- Apply for the preliminary examination from LRB for the project land acquisition;
- Apply for the farmland transfer and permission for construction land;
- Implement the resettlement plan according to the project construction schedule;
- Organize and implement the internal monitoring; select an external monitor and coordinate with and provide necessary assistance in external monitoring;
- Review monitoring reports;
- Prepare and submit progress reports; and
- Coordinate and resolve any disputes and problems during construction.

7.2.3 Affected villages

- Participate in the process of RP socioeconomic survey and formulation of RP;
- Supervise RP implementation and economic rehabilitation activities;
- Collect APs opinions and suggestions and submit to upper level institutions;
- Redistribute remaining village-land after land acquisition;
- Organize income-generation activities and have APs' income level restored;
- Provide assistance to households that are in difficulty.

7.2.4 External monitor

103. The Project Office will entrust an experienced independent monitoring agency to

conduct monitoring for land acquisition and resettlement. Its responsibilities (also see Annex 1, TOR for external monitoring and evaluation) are specified as follows:

- To conduct full-aspect monitoring for resettlement tasks, and submit a report to ADB through SPPMO every six months, and
- To provide technical assistance during the preparation stage to project IA in charge of land acquisition and resettlement.

7.3 Staffing and training plan

7.3.1 Staffing

104. The personnel of the resettlement organizations will come from the government or permanent staff of an enterprise, with strong commitment and relevant experiences. For the details, refer to [Table 18](#).

Table 18 Staffing of the resettlement organizations

Organizations	No. of Staff	Qualification and No. of persons
SPPMO	2	Government officials, experienced
Construction Bureau of Shanghe (Project Office)	2	Government officials, with strong commitment and relevant experience
Affected Units (Village)	1-3	Including 1 leader of affected village

7.3.2 Training plan

105. Involved in the ADB project for the first time, the IA is new to the resettlement implementation. In order to ensure a successful implementation of RP, it is necessary to conduct a training program concerning the RP preparation and implementation before the land acquisition of the project. The training will be organized solely by SPPMO, or conducted by way of visits to other ADB projects in China. The training program is expected to commence after approval of the RP, predictably between July and September, 2005.

7.4 Capacity building of resettlement organization

106. Besides a well-chosen staff for the resettlement organization and necessary training provided for them, the following measures should be adopted for strengthening the institutional capacity:

- Adequate supply of fund and necessary equipment in the Project Office, such as telephones, fax, and computers.
- To establish a full set of working rules, reporting and internal monitoring mechanisms.

In case any problem is found, it should be solved immediately.

- To strengthen monitoring and evaluation, the independent monitoring and evaluation agency should point out the problems and provide problem-solving suggestions to relevant organizations.

VIII. Implementation Schedule

8.1 Implementation principle

107. The time schedule for land acquisition and resettlement should be consistent with the project construction schedule. Based on the time schedule for the project documented in the FS, a corresponding RP implementation schedule has been formulated, which reflects the consistency with civil works.

108. Land acquisition must be completed in three months before the start of civil works so that the affected villages have enough time for land redistribution, resettlement and preparation of the economic rehabilitation plan. Before the land acquisition, there will be a detailed measurement survey (DMS) in each affected village, and a compensation agreement will be negotiated and signed between an affected household and local LRB which is on behalf of local government. The time for paying the compensation will be clearly stated in the agreement according to national regulations, and the compensation will be paid off within three months. Besides the internal monitoring which will be conducted by Project Office and the construct unit, supervision and management of RP implementation will be conducted by relevant government sectors such as LRB, Labor and Social Security Bureau.

8.2 Implementation schedule


109. The project civil works will commence in February 2006, and the WTP will be put into operation in July 2008. Since the WTP and trunk sewer pipelines will be constructed simultaneously, and there is no relocation for the sub-project, the implementation of RP and economic rehabilitation will be completed mainly in the first year. For detailed RP implementation schedule refer to Table 19 and Chart 2.

Table 19 Time schedule for RP planning and implementation

	Activity	Responsible Institution	Time	Status
1	Distribute RIB for all APs, and get feedback	SPPMO, IA	April 15, 2005	Completed
2	Preliminary exam for construction land	Project Unit, LRB	May	Completed
3	Establishment of resettlement organization	Project Office	April /July	Completed
4	Staff training for RP implementation	SPPMO, Project Office	July-Oct.	Ongoing
5	ADB approve RP, (MRM)	ADB	October	
6	Process land use permission	Project Office, Construction Unit	September-Oct	
7	Consultations on details of RP preparation	Construction Bureau	April-Oct.	Ongoing
8	Decide rehabilitation plan of affected units	Construction Bureau	Oct.2005-Jan.2006	
9	Finalization of compensation agreement with affected units	Construction Bureau	Oct.	
10	Start land acquisition	Project Office	Nov., 2005-Jan.2006	
11	DMS survey, and assets inventory, update of RP, and distribute updated RP to APs	Construction Bureau	Oct.2005	
12	Household land redistribution		Dec. 2005	
13	Based on DMS results, submit to ADB about the changes including budget change	Construction Bureau	Jan. 2006	


Chart 2 Time schedule of RP activities

内容	Year Content	2005												2006												2007							
		4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	I	II	III	IV							
项目运行程序	Project procedure																																
可研报告获批准	FS approval																																
亚行审批程序	ADB approval procedure																																
贷款谈判、签订协议	Loan negotiation, agreement																																
建设准备	Preparation for construction																																
初步设计	Preliminary design																																
施工图设计、招标准备	Detailed drawing, bidding																																
征地拆迁	Land acquisition and resettlement																																
安置手册发放	Distribution of RIB																																
建设用地初审	Pre-examination of construction land																																
安置计划(中文)的发放	Distribution of Chinese RP																																
组建队伍并培训	Organization set up and training																																
公布征迁时间表	Annocement of land acquisition time																																
办理土地使用手续	Permission of land use																																
咨询会/确定受影响恢复方案	Consultation meetings, Formulate rehabilitation plan																																
放边线/布界桩	Land use pegging																																
详细征地拆迁影响普查	Detailed measurement survey (DMS)																																
公布更新后的安置计划	Disclosure of updated RP																																
签订协议/补偿费支付	Sign agreement /pay compensation																																
受影响人培训/恢复计划实施	Training for APs/Implementation of rehabilitation plan																																
征地拆迁开始/清场	Commence of land acquisition																																
土地调整	Land redistribution																																
土建及管网施工	Commence of civil works																																
外部监测机构的选定	Selection of external monitor																																
外部独立监测	External monitoring																																
备注：	Remark																																



表示关键路径

Critical Path



表示里程碑

Milestone



表示关键路径 Critical Path

表示里程碑 Milestone

IX. Monitoring, Evaluation and Reporting Systems

9.1 Inspection during implementation

110. In order to ensure a smooth implementation of RP and achieve the RP objectives, regular monitoring and evaluation will be carried out for the Project land acquisition and resettlement in accordance with ADB involuntary resettlement policies and principles. RP monitoring and evaluation includes internal monitoring and independent external monitoring.

9.2 Contents to be monitored

9.2.1 Internal monitoring and supervision

111. SPPMO, the Project Office of Shanghe County, the Land Administration Bureau and the Labor and Social Security Bureau of Shanghe County will participate in the internal monitoring, and Project Office will write out an internal monitoring plan so that all the responsible units would follow the resettlement principles and schedule. The purpose of the internal monitoring is to keep the resettlement organization functioning well.

112. Main contents of internal monitoring are:

- (1) Compensation paid to villages, villager groups and APs;
- (2) Rehabilitation of livelihood and income level of APs;
- (3) Rehabilitation of temporary land occupation;
- (4) Time schedule of above activities;
- (5) Implementation of ADB policies documented in the RP;
- (6) Participation and consultation conducted in RP implementation;
- (7) Staffing, training, working schedule of resettlement organizations and their working efficiency.

9.2.2 External monitoring & evaluation

113. In accordance with ADB requirement, an independent organization is needed to conduct monitoring and evaluation for the RP implementation, which should have successful experience and good reputation, and could well understand the ADB resettlement policies.

SPPMO is responsible for selecting an external monitoring agency and sign a contract with it (for details, refer to the TOR for external monitor). An experienced candidate is Shandong University.

114. The following activities will be conducted by the external monitoring agency:

(1) Baseline survey

115. The independent monitoring and evaluation agency will conduct a baseline survey of the project-affected unit (village) and collect the baseline data on production and living standard of the APs. The survey for APs' production and living standard can be carried out once a year in order to trace the changes of APs' living standards. Methodologically, typical sample panel data will be collected (random sample selection at the first time), interview and field observation, etc., in such ways necessary data are collected, and based on which evaluation can be done through analysis.

(2) Regular monitoring and evaluation

116. During RP implementation, the external monitor will conduct regular follow-up monitoring every six months through field observation, tracing surveys of affected households, and informal interviews with APs. The main points to be monitored are shown as follows:

- Compensation payment and its amount,
- Land redistribution,
- Rehabilitation of infrastructure facility,
- Training and employment,
- Production situation and living standards of APs,
- Time schedule of RP implementation, and
- Resettlement organization.

(3) Public consultation

117. The independent monitor can take part in some of the public consultation meetings during RP preparation and implementation so that it could make a fair evaluation about the effect of APs' participation and provide advice on experiences and lessons learned.

(4) Complaints and appeals

118. The independent monitoring agency can visit the affected units (village) regularly, and visit the organization dealing with grievances (Construction Bureau of Shanghe County), listen to complaints and learn about the grievances redress situation. Persons with grievance should be visited, and focusing on the specific problems some improving measures and recommendations should be proposed to guarantee an effective implementation of the RP.

9.3 Timing for external monitoring and evaluation

119. For a detailed schedule of external monitoring and evaluation, refer to Table 20.

Table 20 Schedule for external monitoring and evaluation

time	Tasks	Remark
Sep.2005	External monitor recruited, working plan prepared	
Jan. 2006	Baseline survey, 1 st monitoring, submit monitoring report No.1	
July 2006	2 nd monitoring, submit report No.2	Half year
Jan.2007	3 rd monitoring, submit report No.3	Half year
Jan. 2008	1 st evaluation, submit report No.4	Yearly
Jan. 2009	2 nd evaluation, submit report No.5	Completion of project

9.4 Reporting system

120. The project construction unit will submit the internal monitoring and evaluation report to the project EA once every 3 months, while the external monitor will submit the external monitoring and evaluation report every 6 months during the resettlement period, and once a year 2 years after the resettlement.

X. Resettlement Budget and Funding

121. The project RP budget has been prepared based on both ADB and Shandong policies. Total budget for the RP is RMB 5.98 million, which accounts for 6.3% of the total Project investment. It mainly consists three parts: basic costs, fees and taxes, and contingencies (see Table 21 for details). All the costs will be paid by local government (the IA for Shanghe Sub-project)

10.1 Basic costs

122. The basic costs consist of land compensation fee and resettlement subsidies to be paid to land loss village collectives, compensation for state-owned land, and for young crops due to the permanent land acquisition. In addition, the basic costs also include compensation for temporary land occupation, which will be borne by the corresponding governmental department of Shanghe County.

10.2 Taxes and fees

123. Based on the GF [2004] Document No. 28 and related policies of Shandong Province, all the expenses related to land acquisition should be listed in the Project budget in full amount. In this RP, tax for cultivated land occupation, land reclamation fee, etc. are all included in the budget, of which, fees for newly increased construction land will be borne by the local government. In order to resettle well the APs, RP budget includes 100,000 Yuan to cover training cost for APs' skills training.

10.3 Contingency costs

124. The contingency cost is equivalent to 10% of the basic costs, sum total: 370,000 Yuan.

10.4 Fund disbursement

125. The land compensation fee and resettlement subsidy due to permanent land acquisition from village collectives will be paid by the Project Office of Shanghe County to the affected village collectives. Compensation for standing crops will be paid directly to the crop owners. Other related taxes and fees will be paid when proceeding with the land acquisition procedures. The principle for fund disbursement is to minimize intermediate transactions (i.e., pay directly to the affected unit of household in one payment).

126. Since the project impact caused by land acquisition is relatively slight, the compensation fund should be (i) paid in full amount at once, and (ii) paid prior to land transfer/occupation or within three months time after the compensation agreement has been signed between APs and the Project Office, whichever comes first.

10.5 Funding of RP budget

127. The fund of RP budget mainly comes from the Fiscal Bureau of Shanghe County.

Table 21 Budget for land acquisition and resettlement

Item	Unit	Amount	Compensation Standard (Yuan)	Costs (Y10,000)	Remark
A. Basic costs				370.73	
I. Rural Collective Land				183.6	
1. Permanent land acquisition	mu	65	25200	163.8	
2. Land for pump stations					
(1) Xisanli Village	mu	2.4	40000	9.6	
(2) Beiguan Village	mu	2.55	40000	10.2	
II. Temporary Land Use				183.11	
(1) Urban roadside	m ²	52003	35	182.01	
(2) Riverside	mu	25	400	1	
(3) River beach land	mu	1.9	500	0.095	
III. Standing Crops	mu	67	600	4.02	
B. Taxes and Fees				190.11	
1. Tax for cultivated land occupation	mu	65	3333.35	21.67	
2. Land reclamation fee	mu	67	12000	80.40	10 times of AAOV
3. Land acquisition management fee				5.14	2.8% of land price (Y183.6)
4. Land registration fee	mu	69.95	53	0.37	
5. Land mapping fee	mu	69.95	306	2.14	
6. Fees for the use of new construction land	m ²	69.95	6667	46.64	10 Yuan/m ²
7. Cost of skill training for APs				10	
8. Management fee for RP implementation				15	including internal monitoring
9. External Monitoring Cost	2% of I,III in Basic cost			3.75	187.62 * 2%
10. Assistance fee for vulnerable groups				5	
Total of Basic and Other costs				560.83	
C. Contingencies	10% of basic costs			37.07	
D. Total				597.90	

ANNEX 1. TOR and Budget for Project External Monitor

A. Introduction

According to the requirements stipulated in the “Regulations on Construction Supervision” promulgated by the Ministry of Construction of the People’s Republic of China (PRC) in 1995, all construction projects shall be properly supervised. It is also a requirement of the Asian Development Bank (ADB) that loan projects that result in land acquisition and resettlement be properly monitored and evaluated. Based on these requirement, and in order to ensure the smooth implementation of the Resettlement Plan (RP), RP monitoring both “internal” and “external”, will be carried out during and after the implementation of the Project.

An independent monitoring agency (Monitor) will be engaged through competitive tenders for the external monitoring and evaluation. The Consultant will be a PRC consulting entity that has experience in ADB or World Bank projects dealing with resettlement issues. Among others, monitoring and evaluation will include:

- Monitoring the progress and effectiveness of RP implementation;
- Evaluation of income restoration and post-resettlement conditions of the APs in affected communities.

B. Objectives and Requirements of Monitoring and Evaluation

The objectives of monitoring and evaluation are to assess if the land acquisition and resettlement is implemented in accordance with the RP and if the goals and principles of the RP are achieved. Specifically, monitoring and evaluation will focus on the following aspects of the APs’ situation and the resettlement process.

- Economic situation after resettlement;
- Timely disbursement of funds;
- Environmental conditions;
- Condition and quality of land rehabilitated due to temporary occupation;
- Rehabilitation of the vulnerable groups;
- Measures taken by the village committees to restore affected livelihoods; and,
- Living conditions and economic status of APs following resettlement in comparison to the non-affected household in the Project areas.

Monitoring and evaluation will include the establishment of socio-economic baselines of the APs prior to land acquisition or physical relocation, and the regular monitoring of their relocation or adjustment during Project implementation, and evaluation of their situation for a period of one or two years afterwards. Qualitative and quantitative methods will be used to evaluate the standard of living of the APs. Investigation will include interviews with IAs, local

officials, village leaders, and survey of 15-20% project affected households. Focus group discussions can be conducted to address issues related to women, poor, other vulnerable groups and unemployed workers.

C. Monitoring Indicators

The following indicators will be monitored and evaluated in accordance with principles, entitlements and rehabilitation strategies/plans set out in the RP:

- Disbursement of entitlements to APs and enterprises/businesses: compensation, housing, cultivated farmland, and employment as specified in the RP.
- Economic rehabilitation: re-allocation of cultivated land, land restoration of temporary land occupation, job opportunities available to APs, number of APs employed or unemployed.
- Demolition of structures/buildings: the compensation for demolished structure/buildings should be equivalent to the replacement cost; whether the affected persons have received the compensation on time, their entitlements regarding moving allowance and transportation allowance.
- Restoration of basic infrastructure and special facilities: all necessary infrastructure and special facilities should be restored at the resettlement sites at least up to a standard equal to the standard at the original location; the compensation for all infrastructure and special facilities should be sufficient to reinstate at least at the original status.
- Satisfaction of APs: satisfaction of APs with various aspects of the resettlement program; the operation of the mechanisms for grievance redress will be reviewed and the speed and results of grievance redressal measures will be monitored.
- Living standard: Throughout the implementation process, the trends in living standards will be observed and the potential problems in the way of restoration of standards of living will be identified and reported. The Consultant will carry out a comprehensive socio-economic survey after the completion of resettlement implementation to document the living standards and the conditions of the APs after resettlement. The survey will be conducted annually for two years, or until most affected households have fully restored their living standards and income generation.
- Reemployment of affected staff and workers, and compensation of lost wages.
- Social adaptability: impacts on children, the elderly and other vulnerable groups, public participation, APs' attitudes and reaction to post resettlement situation, number of complaints and appeal procedures and resolution, implementation of preferential policies, income restoration measures, and improvements in women's status.

D. Special Considerations

Special attention/provisions specified in the RP will be paid to women, the poor, serious affected households and other vulnerable groups during monitoring; these include:

- The status and function of women: Closely monitor any change in women's status, function and situations. The monitoring and evaluating agency will also provide recommendations and assistance to the EA in respect of women's issues.
- Pay attention to seriously affected households and other vulnerable groups: Closely monitor living conditions of the serious land loss households, the old, the weak/ill, and other vulnerable groups after resettlement, to ensure that no hardship is experienced.
- Monitoring and evaluating will provide information on utilization and adequacy of resettlement funds. The Audit Institutions in Shandong Province will audit resettlement accounts and funds. The details of this audit will be made available to the internal monitoring report.

E. Contents and Distribution of Independent Monitoring Reports

A monitoring report will include, among others:

- Conclusion of investigation and evaluation;
- Major existing and potential problems;
- Recommended mitigation or prevention measures which will be incorporated into a revised plan if necessary;
- Evaluation of previous follow-up actions.

The Monitor will provide the EA, IAs and Project Offices of at county and provincial levels and Shandong Project Leading Group, with monitoring reports every six months from the start of the implementation of land acquisition and resettlement, and annual evaluation reports until the Project is completed, or until all resettlement issues have been successfully resolved.

All reports will be available in English and Chinese. EA and IAs shall ensure that information on the progress and status on all aspects of land acquisition and resettlement activities will be provided to the external monitor for verifying the progress reports. The Shandong Provincial Project Management Office (SPPMO) will forward copies of the reports in English to the Asian Development Bank. SPPMO will also submit a resettlement completion report to ADB, to be followed by post-resettlement impact evaluation reports by the monitor, which should provide further evidence whether adverse effects of the Project have been mitigated adequately, and at least "without project" income levels have been restored for the APs.

F. Duration and Frequency of Visits

The consulting services will be required during a period of 3.5 years.

During implementation of the RP, external monitoring by the Monitor will be undertaken every six (6) months for an input of one (1) month. The total input of the domestic resettlement consultant will be 8 months.

G. Monitoring Schedule

Time	Tasks	Time for submitting report to ADB
Sep.2005	External monitor recruited, working plan prepared	
Jan. 2006	Baseline survey, 1 st monitoring, submit monitoring report No.1	March 15, 2006
July 2006	2 nd monitoring, submit report No.2	August 30, 2006(half-year)
Jan. 2007	3 rd monitoring, submit report No.3	Feb. 28, 2007 (half year)
Jan. 2008	1 st evaluation, submit report No.4	Feb. 28, 2008 (yearly)
Jan. 2009	2 nd evaluation, submit report No. 5	Feb.28, 2009 (completion of project)

H. Indicative Budget for the Monitor⁴

Domestic Consultants:

No.	Description	Cost (Yuan)
1	Professional fees (8 person-months@Y12,000)	96,000
2	Survey team (5 times @Y10,000)	50,000
3	Per diem (30 days * 5 times + 10 days) @ Y100	16,000
4	Airfares and other travel (8 trips@Y2,400)	19,200
5	<u>Reporting, materials, translation, communication and other costs (5 reports @ Y10,000)</u>	50,000
	<u>Total</u>	Yuan 231,200
	<u>Converted into \$US (1 \$US=Yuan 8.11)</u>	\$US28,508

⁴ The budget is for the whole resettlement monitoring and evaluation of the Shandong Hai River Environment Control Project rather than any individual sub-project.