Panjin Shuangtaizi Wastewater Treatment Project
Resettlement Action Plan

(Draft)

Panjin Wastewater Treatment Project Construction Headquarter
December 2001
# Table of contents

1 PROJECT DESCRIPTION ................................................................. 4
   1.1 INTRODUCTION .................................................................. 4
   1.2 AREAS AFFECTED/BENEFITED BY THE PROJECT ..................... 4
   1.3 APPLICATION AND APPROVAL OF THE PROJECT ..................... 4
   1.4 DESIGN PROCESS OF THE PROJECT ...................................... 4
   1.5 PROJECT OWNERSHIP AND ORGANIZATION .......................... 4

2 PROJECT IMPACTS ...................................................................... 5
   2.1 DEFINITION OF THE PEOPLE AFFECTED BY THE PROJECT ....... 5
   2.2 ENGINEERING IMPACTS ...................................................... 5
   2.3 IMPACT ANALYSIS ............................................................. 6

3 OBJECTIVE OF RESETTLEMENT AND REHABILITATION ................. 7

4 SOCIO-ECONOMIC SURVEY .......................................................... 8
   4.1 SOCIO-ECONOMIC SURVEY PROCESS ................................ 8
   4.2 SOCIOECONOMIC BACKGROUND OF THE PROJECT AREAS .... 8
   4.3 GUIA VILLAGE OF PANSHAN COUNTY AFFECTED BY LAND ACQUISITION OF THE PROJECT ........ 8
   4.4 TYPICAL INTERVIEW .......................................................... 9

5 LEGAL FRAMEWORK .................................................................. 10
   5.1 LAND ACQUISITION RIGHT AND COMPENSATION CHARACTERS ........................................................................ 10
   5.2 LAW AND ADMINISTRATIVE PROCEDURE .............................. 10
   5.3 COMPENSATION REGULATION .......................................... 10
   5.4 DUTY OF ORGANIZATION .................................................. 11
   5.5 CONCERNED POLICY OF THE WORLD BANK ON RESETTLEMENT .......................................................... 11
   5.6 RESETTLEMENT POLICY OF THE PROJECT .......................... 12

6 ORGANIZATIONS ...................................................................... 13
   6.1 CONCERNED ORGANIZATIONS FOR RESETTLEMENT ACTION ........................................................................ 13
   6.2 RESPONSIBILITY .................................................................. 13
   6.3 STAFFING ............................................................................ 14
   6.4 ORGANIZATION STRUCTURE .............................................. 16
   6.5 MEASURES FOR INSTITUTIONAL STRENGTHENING ............... 16
   6.6 IMPLEMENTATION PROCEDURE .......................................... 16

7 QUALIFICATION AND POLICY OF COMPENSATION ....................... 18
   7.1 COMPENSATION RECIPIENT QUALIFICATION ........................ 18
   7.2 COMPENSATION POLICY ...................................................... 18

8 COMPENSATION STANDARD ........................................................ 19
   8.1 LAND ACQUISITION OF WASTEWATER TREATMENT PLANT ........................................................................ 19
   8.2 THE COMPENSATION FOR GROUND ATTACHMENT ................ 19

9 RESETTLEMENT AND REHABILITATION ....................................... 21
   9.1 RESETTLEMENT AND INCOME RECOVERY PLAN FOR PEOPLE AFFECTED BY LAND ACQUISITION OF THE PROJECT ........................................................................ 21
   9.2 REHABILITATION AND RECONSTRUCTION PLAN FOR AFFECTED INFRASTRUCTURES AND GROUND ATTACHMENTS ........................................................................ 21

10 ENVIRONMENTAL PROTECTION .................................................... 22
   10.1 THE ENVIRONMENT AROUND GUIA VILLAGE OF PANSHAN COUNTY .......................................................... 22
   10.2 CLEAN UP OF DISMANTLED HOUSES .................................. 22
   10.3 POLICY ELIMINATING ENVIRONMENT IMPACTS CAUSED BY SEWERS CONSTRUCTION .......................... 22
ATTACHMENT: LOCATION OF THE PROPOSED PALIUM PROJECT

<table>
<thead>
<tr>
<th>16</th>
<th>ENTITLEMENT MATRIX</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>MONITORING AND EVALUATION</td>
</tr>
<tr>
<td>14</td>
<td>COST AND BUDGET FOR COMPENSATION</td>
</tr>
<tr>
<td>13</td>
<td>IMPLEMENTATION SCHEDULE OF RESSETLEMENT ACTIVITIES</td>
</tr>
<tr>
<td>12</td>
<td>GRIEVANCES AND APPEALS</td>
</tr>
<tr>
<td>11</td>
<td>PUBLIC PARTICIPATION AND CONSULTATION</td>
</tr>
</tbody>
</table>

---

Resettlement Action Plan of Punlipi Shumugamal Wastewater Treatment Project
1 PROJECT DESCRIPTION

1.1 Introduction

Panjin Shuangtaizi Wastewater Treatment subproject is a component of Second Liao River Basin Project (LRBP2), which consists of Shenyang, Fushun, Panjin. The subproject will surely improve the local condition of Shuangtaizi River, a tributary of Liao River, and the environment of sea-shore. The subproject includes the construction of one wastewater treatment plant, interception system and wastewater reuse system.

Panjin Shuangtaizi WWT plant is located near the intersection of outer circle road and Shuangtaizi River. The capacity of the Plant is 100,000 t/d in short-term including 60,000 ton/day deeper treatment system for industrial reuse. The Plant is planned to acquire 12 hectare land. Proposed engineering will also include construction of 9.7 km interceptor, 4.25 km reuse pipeline, 1 new pumping station and the upgrading of 1 existing pumping station.

1.2 Areas affected/benefited by the project

The area affected by the construction of the wastewater treatment plant is Gujia village in Panshan county under the leadership of Panjin. The area affected by sewers construction is Shuangtaizi District of Panjin. The areas benefited from the project are Shuangtaizi District, down stream of Shuangtaizi river, sea-shore beach. At present, the domestic and industrial wastewater from Shuangtaizi district of Panjin is discharged directly to Liuli River and Shuangtaizi River without any treatment. Then the wastewater finally enters Liaodong bay. It causes the pollution of downstream of Shuangtaizi river and off-shore sea water body of Bohai sea and deteriorates the urban environment of Panjin city. The construction of the Shuangtaizi Wastewater Treatment Plant will play an important role on the improvement of water quality of the river system. It will relieve and eliminate the environmental pollution and protect the ecological environment of Panjin. Generally the construction of the project will produce a series of significant social, economic and environmental benefits because the pollution of Bohai bay resulted from the sewage of Panjin will be mitigated and ecological environment and the health of the people living in the sides of Shuangtaizi River can be protected.

1.3 Application and approval of the project

Liaoning Provincial Development Planning Committee (LPDPC) has approved the Proposal for Panjin Wastewater Treatment and Reuse Project in January 2002.

1.4 Design process of the project

- Panjin Drainage Company prepared the Proposal of the project in August 2001.
- Panjin Drainage Company employed the Liaoning Environmental Scientific Research Institute to complete the Environmental Impacts Assessment of the project in August 2001, and presented it to Liaoning Provincial EPB for review and approval.
- Panjin Drainage Company employed the Northeast Urban Engineering Design Institute to prepare the feasibility study report of the project in August 2001.
- Panjin Drainage Company employed the Northeast Urban Engineering Design Institute to prepare the preliminary design of the project in October 2001.

1.5 Project ownership and organization

The project is an urban infrastructure character. The Panjin Municipality is responsible for the whole investment and construction of the project. The funds for the construction of the project will come from local counterpart funds and the World Bank loan. The total investment is 339 million RMB Yuan, including 173 million Y local funds and 20 million USD of the loan (equal to 166 million RMB Y). The Government also will be responsible for the repayment of the interest and loan.

Panjin Wastewater Treatment Project Construction Headquarter will be in charge of the implementation of the project.
2 PROJECT IMPACTS

2.1 Definition of the people affected by the project

The Affected people by the project refers to the people affected on the following aspects due to the implementation of the project:
1. Their living standard is affected adversely by the project.
2. The Ownership, qualification and benefits or interests of their houses and lands including house foundation, farmland and pasture are affected temporarily or permanently by the project.
3. Their business, agricultural and working activities, their residential place and living customs are affected adversely due to the project.

2.2 Engineering impacts

Panjin Shuangtaizi WWT plant is located near the intersection of outer circle road and Shuangtaizi River. The Plant will acquire 12 hectares paddy lands owned by Gujia village of Panshan county under leadership of Panjin.

The proposed project will also include the construction of 2 interceptors to delivery wastewater to the proposed plant as well as the construction of reuse system, 1 new pumping stations and the upgrading of 1 existing pumping station. Table 2-1 presents the details of land use by the proposed interceptors and pumping station

Table 2-1 Land impacts of interceptors and pumping stations proposed in the project

<table>
<thead>
<tr>
<th>No</th>
<th>Sewers section</th>
<th>Length (m)</th>
<th>Diameter (mm)</th>
<th>Land occupation (hectare)</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Liuli river</td>
<td>3,800</td>
<td>D1000-D1500</td>
<td>11.4</td>
<td>State owned flooding land (temporary use)</td>
</tr>
<tr>
<td>2</td>
<td>Shuangtaizi river</td>
<td>5,900</td>
<td>D1000-D2400</td>
<td>17.7</td>
<td>State owned flooding land (temporary use)</td>
</tr>
<tr>
<td>3</td>
<td>Reuse pipeline</td>
<td>4,250</td>
<td>D500-D800</td>
<td>6.375</td>
<td>State owned road land (temporary use)</td>
</tr>
<tr>
<td>4</td>
<td>New pumping station</td>
<td></td>
<td></td>
<td>0.15</td>
<td>Collective land</td>
</tr>
<tr>
<td>5</td>
<td>The existing pumping station</td>
<td></td>
<td></td>
<td>0.15</td>
<td>Exiting state owned land</td>
</tr>
</tbody>
</table>

The interceptors will be laid along the east bank of Liuli River and the north bank Shuangtaizi River and will temporarily use the state-owned flooding land on one side of the two rivers. The proposed water reuse pipeline will be laid along outer round road and will temporarily affect the rainwater ditch on one side of the road that now is administrated by Transportation Department. So the construction of interceptors and reuse pipeline will not involve any farm land. The new pumping stations will occupy 0.15 hectares collective land of Gujia village of Panshan county.

Table 2-2 shows the whole impacts of the project.
Table 2-2  Land and ground attachment affected by the project

<table>
<thead>
<tr>
<th>Category</th>
<th>Unit</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Permanent land acquisition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WWTP: Gujia village of Panshan county</td>
<td>Paddy land</td>
<td>Hectare</td>
</tr>
<tr>
<td></td>
<td>Affected people</td>
<td>Person</td>
</tr>
<tr>
<td>New pumping station</td>
<td>Collective land</td>
<td>M²</td>
</tr>
<tr>
<td>2. Temporary land use</td>
<td>Hectare</td>
<td>35,475</td>
</tr>
<tr>
<td>3. Ground attachments</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power pole</td>
<td>Piece</td>
<td>56</td>
</tr>
<tr>
<td>Transformer</td>
<td>Piece</td>
<td>3</td>
</tr>
<tr>
<td>Trees below 10 CM</td>
<td>Piece</td>
<td>1,230</td>
</tr>
<tr>
<td>Trees 10-20 CM</td>
<td>Piece</td>
<td>1,500</td>
</tr>
<tr>
<td>Trees above 20 CM</td>
<td>Piece</td>
<td>2,500</td>
</tr>
<tr>
<td>Fruit trees</td>
<td>Piece</td>
<td>50</td>
</tr>
<tr>
<td>Simple flat house</td>
<td>Piece</td>
<td>6</td>
</tr>
</tbody>
</table>

2.3 Impact analysis

The proposed Shuangtaixi wastewater treatment plant and one new pumping station will acquire 12.15 hectares paddy lands of Gujia village of Panshan county. Table 2-3 indicates the impact analysis of the construction of WWTP.

Table 2-3  Impact analysis of the construction of WWTP

<table>
<thead>
<tr>
<th>Affected area</th>
<th>Prior to land acquisition</th>
<th>Permanent land acquisition</th>
<th>Affecting extent (Occupied land/total land)</th>
<th>Affected people</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gujia village of Panshan county</td>
<td>Population (person)</td>
<td>Total Cultivated land (hectare)</td>
<td>Permanent land acquisition (hectare)</td>
<td>Affecting extent</td>
</tr>
<tr>
<td>2570</td>
<td>200</td>
<td>12.15</td>
<td>6%</td>
<td>153</td>
</tr>
</tbody>
</table>

From the Table 2-3, we can see that the impacts caused by the land acquisition of the project is very small because the affected land only accounts for 6 % of the total cultivated land in Gujia village of Panshan county. When land compensation and labor resettlement compensation are paid, Gujia village can use the compensation to adjust production structure and provide employment opportunities for affected people which ensure their living level and income level won’t decrease due to the project.

The following table showed the situation of people affected by the land acquisition of the project

<table>
<thead>
<tr>
<th>Affected village team</th>
<th>Quantity of land acquisition (hectare)</th>
<th>Affected population</th>
<th>Sex</th>
<th>Age</th>
<th>Labor status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>female</td>
<td>male</td>
<td>18-50</td>
<td>51-60</td>
</tr>
<tr>
<td>No. 9 team</td>
<td>7</td>
<td>34</td>
<td>47</td>
<td>16</td>
<td>45</td>
</tr>
<tr>
<td>No. 11 team</td>
<td>5</td>
<td>28</td>
<td>44</td>
<td>12</td>
<td>40</td>
</tr>
</tbody>
</table>
3 OBJECTIVE OF RESETTLEMENT AND REHABILITATION

- Optimizing the project design to reduce the scope affected by land acquisition and house demolition of the project as possible and to minimize the involuntary displacement.

- All involuntary displacement and resettlement will be implemented as an integral part of the project. Person or entities affected by the project should be given sufficient compensation and provided the opportunities to get benefits from the project.

- The compensation should be paid before the implementation of land acquisition.

- The people loosing their lands due to the project will be fully compensated. The job opportunity will be provided to the affected people.

- The participation of PAP will be encouraged during the preparation of the RAP and their comments and suggestions on relocation and resettlement issues will be fully respected and considered.

- Efforts should be taken to improve PAP’ livelihoods and living to a relative higher level before the project, or at least to restore them, in real terms, to pre-displacement levels.
4 SOCIO-ECONOMIC SURVEY

4.1 Socio-economic survey process

The socio-economic survey is conducted with an aim of learning the quantity and quality of the objects affected by the project, providing the basic information to identify the loss compensation, socioeconomic assessment, justification of the project scale, socioeconomic impact study in the project area, preparing the resettlement and relocation plan, estimating resettlement cost, managing the resettlement implementation, monitoring and evaluating.

The Panjin Wastewater Treatment Project Construction Headquarter (PWTPCH) and some concerned departments investigated the tangible objects and quantities affected by land acquisition of the project in August 2001 in order to prepare the Project Feasibility Study.

The land acquisition scope demarcation, detailed impacts survey and on-site measurement with the participation of affected people were conducted in September 2001.

The Panjin WTPCH made a survey on houses, lands and ground attachment affected by the interception of the project in September 2001. Based on the above survey, an initial resettlement plan was presented. At the same time, a public opinion survey within 20 sampled households in the affected area was carried out. Before the survey, the special skill training was undertaken.

Based on the socioeconomic survey, there are no minority people and historical relics to be affected by the proposed project.

4.2 Socioeconomic background of the project areas

Panjin is located in the southwest of Liaoning, and down stream of Liao river, facing Bohai sea and locating within the Economic Development Zone Rounding Bohai Sea. Geographically, the city is at east longitude 122°21' and north latitude 41°1', adjacent with Yingkou. The city has a low and flat terrain in urban area. Before entering Bohai Sea, the Shuangtaizi River goes through the Panjin and divides it into two districts, Xinglongtaii district in south and Shuangtaizi district in north.

Jurisdiction of Panjin covers two districts (Xinglongtai and Shuangtaizi) and two counties (Panshan and Dawa). Total area is 3,750Km², including 167 km² urban with 450,000 population.

Panjin is approved by the State Council as one of the open cities in the Liaodong peninsular. As an important petroleum and chemical industrial base, the city has become a modern garden city with a leading industry of petroleum production, transportation, communication, various and harmonious industrial types.

4.3 Gujia village of Panshan County affected by land acquisition of the project

Gujia village of Panshan County has 850 households with 2,570 population including 1,439 male, accounting for 56% and 1,131 female, accounting for 44%. The village totally owns about 200 hectares paddy land. Members of the village mainly engage in agricultural activities. In addition, the village established 3 collective enterprises which are Panjin Paints Plant, Panjin Chemical Plant and Panjin Prefabricated Concrete Board Plant. In 2000, the average revenue per capita is about 4,000 Yuan among which 1,000-1,500 Yuan come from agricultural activities. The administration committee of the village consists of 5 people. The village has 13 villager teams in total. The land acquisition of the project will affect the No. 9 and No. 11 teams. The No. 9 team has 233 people with 262 Mu paddy land and the No. 11 team has 97 people with 127 Mu paddy land. The villager congress of the village stipulated that land will be reallocated within individual team every 5 years. And the village doesn’t have reserved lands, all lands of the village have been distributed to individual team.
4.4 Typical interview

In order to learn about detailed situation of PAPs and compile a practical resettlement action plan, an extensive interviews and discussions have been taken. Several typical interviews are recorded as following:

4.4.1 Mr. Wang, secretary of the Gujia village

Our village has 850 households totally, with about 2,570 people and 200 hectare paddy land. Average per capita income is about 4,000 Yuan in 2,000. There are 13 teams; All members of the village support the construction of the project because the project can improve surrounding environment, and promote local economic development as well as benefit to country and the local people. We will fully resettle the people losing their lands due to the project by providing employment opportunities and adjusting production structure.

4.4.2 Mr. Liming, the resettler

My family has 3 people. I am a villager of Gujia village. I make living on agricultural activities. I support the construction of project which will improve the living environment of Panjin. I am very happy to hear that I will be compensated according to relevant policy of our country and will be provided the employment opportunity.

4.4.3 Mr. Yang, the director of Panjin Land Administration Bureau

Panjin Government has paid and will pay more attention to the project and requires various concerned departments to give a strong support because it will improve the local environment of our city largely. The project will occupy 12 hectare paddy land of the Gujia village of Panshan county. No ground attachments will be affected except some irrigation channels which need to be diverted. Our Land Administration Department will identify the land compensation standard according to the concerned stipulation and preferential policy of the Country on Land Use. And we will try our best to complete the project successfully.
5 LEGAL FRAMEWORK

5.1 Land acquisition right and Compensation characters

Relevant provisions issued by "Land Administration Law of the PRC" indicate that: When any individual or entities implement construction with the land use involved, they should apply to use the State-owned land according to concerned Laws and Regulations.

Article 44: When farm land is used for construction, the following approval procedure should be followed. As for road, pipeline and large scale of infrastructure construction project approved by province, autonomous region or municipality directly controlled under central government or construction projects approved by the State Council, in case farm land is used for construction, land acquisition should be approved by the State Council.

Article 45: Requisition of the following type of land should be approved by the State Council: a) Basic farm land; b) more than 35 hectares of cultivated land which don't belong to basic farm land; c) other type of land more than 70 hectares.

Article 47: Compensation for the land acquisition should be identified according to its original use purpose.

Article 58: If the following event occurs, the use right of the state-owned land can be drawn back (the concerned land administration department submit application to original Government which approved the land use right or to the Government which has the right of approving land use right). a) for the purpose of public utility facilities; b) for old urban area upgrading to implement the City Plan and to adjust land use plan.

In addition Land Administration Law of the PRC stipulate that: the transferring of the land use right means that after the Government above county-level approved and the compensation, resettlement paid by the desired land user, the land use right can be transferred to the new user without any more payment.

For the following land use purpose, if it is necessary, the Government above county-level can approve the land transferring: urban infrastructure and public beneficial project, key power, water supply and hydraulic facilities construction project of the Country.

5.2 Law and administrative procedure

Relevant provisions of "Land Administration Law of the PRC" state that:

Article 46: For land acquisition by the State, after approval according to legal procedure, the Government above county-level will issue the public announcement of the land acquisition / demolition, and organize the implementation; The owner or the user of the requisitioned land should bring the land ownership certificate to the concerned administration department of local Government for registration within the date limited in public announcement.

5.3 Compensation regulation

Relevant provisions of "Land Administration Law of the PRC" indicate that:

Article 47: Land acquisition shall be compensated for on the basis of the original purpose of use.

The compensation for cultivated land acquisition shall include compensation for the land, labor resettlement, ground attachments and young crops on the requisitioned land. Compensation for cultivated land acquisition shall be 6 to 10 times of the average annual output value of the requisitioned land in 3 years. Labor resettlement subsidies for cultivated land shall be calculated according to the agricultural population resettled.
Resettlement Action Plan of Panjin Shuangtaizi Wastewater Treatment Project

The agricultural population resettled by the project shall be calculated by requisitioned cultivated land amount divided by per capital land allocation before the requisition. The resettlement subsidies for each agricultural people resettled shall be 4 to 6 times of the average annual output of the requisitioned land in 3 years before such requisition. However, the highest resettlement subsidies for each hectare of the requisitioned cultivated land shall not exceed 15 times of its average annual output value for the 3 years prior to such requisition.

If land compensation and labor resettlement subsidies identified in accordance with the provisions of the second paragraph of this article are still insufficient to help the resettler to maintain their original living level, the labor resettlement subsidies may be increased but it should be approved by People’s Governments of provinces, autonomous regions or municipalities managed directly under the central government. However, the total land compensation and labor resettlement subsidies shall not exceed 30 times of the average annual output value of the requisitioned land for the 3 years preceding such requisition.

5.4 Duty of organization

Relevant provisions of “Land Administration Law of the PRC” state that:

Article 66: The People’s Government land administrative department above county level has a duty of supervise and check the activities violating land administration law and regulation. The supervisor of land administration will know well concerned land administration law and regulations and should enforce the law on his duty.

Article 70: Land administrative department of the People’s Government above county level shall make disciplinary sanction on the state working staffs who violate the law, and punish them according to concerned laws and regulations; If the department don’t have such right, they can submit the proposal of disciplinary sanction to the same class or higher class disciplinary supervision department which can handle them according to concerned laws and regulations.

Article 79: If somebody embezzles and un-properly earmarks the land compensation and other concerned charge and commit a crime, he should be given criminal sanction; if don’t commit a crime, he should be given a disciplinary sanction.

5.5 Concerned policy of the World Bank on resettlement

The policy objectives of World Bank’s OP 4.12:

Objective of the Bank for resettlement is to make sure that the resttlers caused by the project can gain the interest from the project.

a) Avoiding or minimizing resettlement where possible.

b) Preparation of resettlement plans where displacement is unavoidable.

The affected people should be insured that:

- Compensation for losses at full replacement cost to all displaced persons should be paid.
- Assisting all displaced persons with moving and support during the transition period at the resettlement site.
- Improvement of former living standards, income earning capacity and productive levels, or at least restores them and the need of poorest people affected by the project should be paid more attention particularly.

c) Encouraging community participation in planning and implementing resettlement. A proper community organization should be set up and social and cultural organization in resettlement area should be supported and made use of as possible.
d) Integrating resettlers into host communities and minimizing adverse impacts on host communities. The best way is to resettle PAPs in the area benefited from the project and consult with original residents beforehand.

e) Provision of land, housing and infrastructure to be provided to adversely affected populations including indigenous groups and minorities who may have customary rights to the land or other resources affected by the project, even if they don't have the legal land use right.

5.6 Resettlement policy of the project

The compensation and resettlement policy of the project is made based on the concerned resettlement policy made by Panjin Municipal Government, Liaoning Provincial Government, the People's Republic of China and the World Bank. In order to keep the compensation and resettlement policy of the project in accordance with the resettlement target of the project, in case there are any big revision or variation on the resettlement policy such as variation of compensation qualification and condition, reduction of compensation standard, limitation and reduction of helps and assistance provided to affected people, it should be agreed by project's owner and the World Bank before implementation.
6 ORGANIZATIONS

6.1 Concerned organizations for resettlement action

Relevant organizations responsible for planning, management, implementation and monitoring of the resettlement action include:
- Liaoning Urban Construction and Renewal Project Office (LUCRPO)
- Panjin Urban Wastewater Treatment Project Leading Group (PUWTPLG)
- Panjin Wastewater Treatment Project Construction Headquarter (PWTPCH)
- Panjin Urban Drainage Management Ltd. Company (PUDMLC)
- Panjin Municipal Urban Planning Bureau (PUPB)
- Panjin Municipal Land Administrative Bureau (PLAB)
- Land Administration Bureau of Panshan County of Panjin (LABDC)
- Gujia Village of Panshan County of Panjin (GVOPC)
- Northeast Urban Engineering Design Institute (NUEDI)
- Resettler Research and Monitoring Center of Hehai University (RRMCHU)

Vice-mayor of Panjin in charge of the urban construction is appointed as the director of Panjin UWT Project Leading Group. Vice-secretary of Panjin Government is standing vice-director. The director of Panjin Construction Committee is appointed as the vice-director. The members include Construction and Planning Committees, Finance Bureau, Land Administrative Bureau, Public Utility Bureau, EPB, Laio River Petroleum Detection Bureau. The leading group has a subordinate unit - Panjin Wastewater Treatment Project Construction Headquarter (PWTPCH). The head of it is the director of Construction Committee.

The PWTPCH is in charge of the organization, coordination, supervision and checking of the land acquisition, housing demolition and resettlement works, and also response for the preparation and implementation of resettlement action plan. The Land Administrative Bureau of Panshan County is responsible for the land acquisition. Panjin Municipal Land Administrative Bureau is responsible for supervision of land acquisition. Northeast Urban Engineering Design Institute is responsible for the design of the project. Resettler Research and Monitoring Center of Hehai University is responsible for external monitoring of resettlement action independently.

6.2 Responsibility

6.2.1 Liaoning Urban Construction and Renewal Project Office
- To help and guide the preparation of resettlement action plan report, manage the implementation of land acquisition, demolition and resettlement
- To supervise and check the progress of land acquisition and resettlement
- To keep the liaison between the project city and the World Bank
- To review the internal supervision report on resettlement and submit it to the World Bank

6.2.2 Panjin Wastewater Treatment Project Construction Headquarter
- To make and carry out the resettlement plan
- To organize and coordinate the preparation of resettlement action plan report
- To disburse working funds and supervise its use
- To guide, coordinate, supervise the process and progress of land acquisition, demolition and resettlement action.
- To carry out internal supervision and identify the external supervision organization and coordinate and support the external monitoring
- To review and check the monitoring report
- To prepare the progress report and submit it to Liaoning Urban Construction and Renewal Project Office
- To coordinate and handle the issues and contradiction occurred in the implementation of resettlement
Resettlement Action Plan of Panjin Shuangtaizi Wastewater Treatment Project

6.2.3 Panjin Urban Drainage Management Ltd. Company
- To invite and entrust the design institute to identify the affected scope by the project
- To organize and implement the socioeconomic survey
- To submit the application of land using and planning permission certificate and land construction permission certificate to Panjin Urban Planning Bureau and Panjin Land Administrative Bureau
- To implement the resettlement action plan according to the project construction schedule
- To disburse the compensation and resettlement funds according to agreement
- To arrange and implement internal supervision

6.2.4 Panjin Municipal Land Administration Bureau
- To carry out the concerned policy and regulations on land management of our country
- To participate the preparation of resettlement action plan and review it
- To issue the land use permission certificate
- To guide, coordinate and supervise the resettlement action
- To coordinate and handle the issues and contradiction occurred in the land acquisition and transferring
- To go through the formality on land acquisition

6.2.5 Land Administration Bureau of Panshan County of Panjin
- To participate the socioeconomic survey
- To participate the preparation of resettlement action plan and resettlement method
- To supervise and check the PAPs’ resettlement and income recovery action
- To reflect the comments and suggestions of PAPs to the higher department

6.2.6 Panjin Municipal Urban Planning Bureau
- To examine the land scope used by the project
- To issue land use planning permission certificate

6.2.7 Administration Committee of Gujia village
- To participate the socioeconomic survey and the preparation of resettlement plan and method
- To participate the compilation of resettlement plan report
- To organize the public consultation and propagate the land acquisition and demolition policy
- To reallocate the land after land acquisition
- To organize production development and income recovery activities after the land acquisition
- To reflect the comments and suggestions of PAPs to the higher department

6.2.8 Northeast Urban Engineering Design Institute (design organization)
- To reduce the project impacts by optimizing the engineering design
- To identify the requisitioned land scope and demolition scope
- To assist the preparation of resettlement action plan
- To provide technological consultation to project office on data survey and handle

6.2.9 Resettler Research and Monitoring Center of Hehai University (independent external monitoring organization)
It will, as an independent external monitoring and evaluation organization, monitor and supervise all aspects of the implementation of resettlement action plan and submit the external monitoring report to the project office and the World Bank for review

6.3 Staffing
The resettlement organizations will appoint the high quality staffs on various concerned specialties, among which 27 full-time staffs who have good technology and experiences. The maximum working staff will be up to 58 in peak time. A smooth information flowing channel is set up which will play an important role in
Resettlement Action Plan of Panjin Shuangtaizi Wastewater Treatment Project

implementation of resettlement action. And resettlement implementation organizations are equipped with good transportation and communication tools. Survey, design and supervision organizations have strong capacity and technology on computer operation. The resettlement implementation and monitoring organizations of the project both have rich experiences on land acquisition and house demolition and resettlement.

The staffing of concerned resettlement organizations are showed in table 6-1.

Table 6-1 Staffing of concerned resettlement implementation organizations

<table>
<thead>
<tr>
<th>Organizations</th>
<th>Staffs (person)</th>
<th>Working staffs in peak time (person)</th>
<th>Qualification of the working staff</th>
<th>Operational starting point</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panjin Project Leading Group</td>
<td>3</td>
<td>10</td>
<td>Officials who graduated in university</td>
<td>September 1999</td>
</tr>
<tr>
<td>Panjin Project Headquarter</td>
<td>6</td>
<td>11</td>
<td>Engineering, technological, and management staffs</td>
<td>October 1999</td>
</tr>
<tr>
<td>Panjin Land Administration Bureau</td>
<td>2</td>
<td>3</td>
<td>Public servant and economic management staffs who graduated in university</td>
<td>September 2001</td>
</tr>
<tr>
<td>Panjin Urban Planning Bureau</td>
<td>2</td>
<td>2</td>
<td>Public servant</td>
<td>September 2001</td>
</tr>
<tr>
<td>Land Administration Bureau of Panshan County</td>
<td>2</td>
<td>4</td>
<td>Public servant</td>
<td>September 2001</td>
</tr>
<tr>
<td>Administration Committee of Gujia village of Panshan County</td>
<td>2</td>
<td>4</td>
<td>Public servant</td>
<td>September 2001</td>
</tr>
<tr>
<td>Northeast Urban Engineering Design Institute</td>
<td>4</td>
<td>12</td>
<td>Engineering technological staffs who graduated in university</td>
<td>August 2001</td>
</tr>
<tr>
<td>Resettler research and monitoring center of Hehai University</td>
<td>6</td>
<td>12</td>
<td>Professor, doctor and master</td>
<td>October 2001</td>
</tr>
<tr>
<td>Total</td>
<td>27</td>
<td>58</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6.4 Organization structure

![Organization structure diagram]

6.5 Measures for institutional strengthening

- 3 set of personal computers will be equipped for the project construction headquarter
- Enhancing reporting and internal monitoring in order to find and solve any problems timely.
- To strengthen independent monitoring and evaluation organization who will present any issues occurred to concerned authorities and suggest necessary solutions.

6.6 Implementation procedure

6.6.1 Identifying scope of land acquisition/demolition

Based on the land acquisition map and layout design drawing, the Project Construction Headquarter investigated and registered the affected inventory within the red-line scope.
6.6.2 Investigation for inventory affected by the project

Panjin Project Construction Headquarter, Panjin Land Administrative Bureau and Panshan county land administration bureau arrange staffs to investigate and record carefully the land, housing, ground attachments, structures and equipment affected by the project. Ownership and properties of affected infrastructures within the red line scope will be identified firstly, and then information on land acquisition and demolition will be introduced to the affected individual or entities.

6.6.3 Planning for land acquisition and resettlement

Panjin Project Construction Headquarter, Panjin LAB and Panshan LAB will jointly prepare the land acquisition and resettlement plan and related budgets on the basis of the surveyed results and concerned policies and regulations. When it finished, the plan will be submitted to the higher level authority for review and approval.

6.6.4 Approval of resettlement action plan

6.6.5 Declaration of tree cutting

Panjin Project Construction Headquarter shall be responsible for providing number of the trees need to be cut to Park & Garden Division of Panjin Forestry Bureau and City Greening Office, and make an application to the authorities for approval. When it is approved, City Greening Office will be responsible for the implementation of cutting trees. Compensation for trees cutting shall be given based on the investigated number of trees.

6.6.6 Agreement of compensation and resettlement

Based on the resettlement policy, regulation and proposed plan, Panjin Project Construction Headquarter will sign a land use agreement with Panshan Land Administration Bureau.

6.6.7 Detailed steps of land acquisition

1) Under the supervision and coordination of the Project Leading Group, the Panjin Project Construction Headquarter (PPCH) sign a lump sum compensation agreement of the land acquisition with the Panshan County Land Administration Bureau.

2) The PPCH and Land Administration Bureau of Panshan County jointly investigate and record the affected land and ground attachments within the land acquisition scope.

3) Panshan County Land Administration Bureau will negotiate and sign a compensation agreement with the affected Gujia village. The Panjin Land Administrative Bureau will be engaged as supervisor and public notary.

4) The Panshan County Land Administration Bureau pay compensation to the affected Gujia Farm according to the signed agreement.

5) How to spend the compensation should be agreed and decided by more than 2/3 majority of the members of the Gujia village.

6.6.8 Land use certificate

As all necessary information prepared, Panjin LAB will issue an official approval. Then, Panshan LAB will issue temporary or permanent land use license.

6.6.9 Summarization and record-keeping

After the land acquisition finished, a report summarizing the work should be prepared and kept in the archives.
7 QUALIFICATION AND POLICY OF COMPENSATION

7.1 Compensation recipient qualification

As for land acquisition of the project, affected people and inventory, which are confirmed before January 2002 when public notice of land acquisition will be issued, is qualified for compensation. All the people affected by the project may will be given the rational compensation and help.

- Villagers of Gujia village affected by the land acquisition of the project.
- Owner of the ground attachment temporarily affected by the project construction.

7.2 Compensation policy

7.2.1 Principle

The detailed resettlement policy is made based upon the concerned resettlement policy prescribed by the China, Liaoning Government, Panjin Municipal Government and the World Bank as following:

- Compensation standard for all assets affected by the project is identified based upon replacement cost.
- Compensation will be paid before the properties and lands are occupied.
- PPCH will negotiate with the owners of the assets affected by the project on compensation and resettlement.
- Villagers of Gujia village affected by land acquisition of the project will be provided employment opportunities, if necessary training and help will also be provided to ensure their living level will not be lower than that before the project.
- The affected ground attachment will be compensated entirely according to market price.
- All people affected by the project will be paid rational compensation and resettlement.
- People affected by land acquisition of the project won’t be unemployed due to losing their land.
- Infrastructures affected by the project will be rehabilitated and reconstructed.

7.2.2 Compensation policy for all kinds of PAPs

A. Gujia village of Panshan County:
- They have right of getting land compensation.
- To restore affected people’s income and living by use of land compensation and labor resettlement subsidy.
- To develop production and adjust production structure by use of land compensation and labor resettlement subsidy under the agreement of 2/3 majority of member of Gujia village

B. Land contractor of Panshan County
- Employment opportunities will provide them to ensure that their income will be restored to the previous level before the project by using the land compensation and labor resettlement subsidies.

C. Owner of the ground attachment:
- Compensation will be paid to the owner of the ground attachments according to the market price.

D. Infrastructures affected by the project
- Infrastructures affected by the project will be rehabilitated and reconstructed.
8 COMPENSATION STANDARD

8.1 Land Acquisition of Wastewater Treatment Plant

The land compensation standard is determined based on the land benefit estimate according to the Land Administration Law. Table 8-1 presents three years average output value of the affected lands.

Table 8-1 Three Years Average Output Value of Affected Lands

<table>
<thead>
<tr>
<th>Crop</th>
<th>Three years output(kg/ha)</th>
<th>Average output (kg/ha)</th>
<th>Price (Y/ha.)</th>
<th>The output value of main product (Y/ha.)</th>
<th>The output value of by-product (Y/ha.)</th>
<th>Average output value (Y/ha.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paddy</td>
<td>9,203</td>
<td>9,680</td>
<td>9,800</td>
<td>9,561</td>
<td>1.75</td>
<td>16,731</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5,019</td>
<td></td>
<td>21,750</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: the output value of by-product = the output value of main product × 30%

According to the Land Administration Law of PRC and related regulation concerning state-owned land transferring of Panjin, the land compensation is determined as ten times as three years average output value. Considering no reserved lands in the affected village for lands reallocation results in difficult resettlement, the labor resettlement subsidy is determined as 15 times as three years average output value. Altogether it is as 25 times.

According to Implementation Directives of Farmland Occupation Tax of Liaoning Province, the average farmland occupation tax will be determined by the local capita farmland allocation level and economic development level. The farmland occupation tax is 5.5 Yuan/m² for the project. According to above requirement, the land reclamation cost is 10 Yuan/m². Young crops compensation is determined based on one-season output value; management fee is 4% of the land acquisition cost; The land use fee is 28 Yuan/m². Irrigation channel diversion cost is determined as 22,500 Yuan/hectare. Table 8-2 presents the compensation standards for the land acquisition.

Table 8-2 Compensation standard for land acquisition

<table>
<thead>
<tr>
<th>Category</th>
<th>Land compensation</th>
<th>Labor resettlement subsidy</th>
<th>Land reclamation</th>
<th>Land occupation tax</th>
<th>Young crop</th>
<th>Land use fee</th>
<th>Irrigation channel diversion</th>
<th>Management fee</th>
<th>total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paddy land</td>
<td>21.75</td>
<td>32.625</td>
<td>10</td>
<td>5.5</td>
<td>2.175</td>
<td>28</td>
<td>2.25</td>
<td>4.092</td>
<td>106.392</td>
</tr>
<tr>
<td>Receiver</td>
<td>Gujia village</td>
<td>Land contract or</td>
<td>Land administration department</td>
<td>Land administration department</td>
<td>Land contract or</td>
<td>Land administration department</td>
<td>Gujia village</td>
<td>Land administration department</td>
<td></td>
</tr>
</tbody>
</table>

8.2 The Compensation for Ground Attachment

According to the relevant regulations, table 8-3 presents the compensation standards for ground attachment determined based on market price:
<table>
<thead>
<tr>
<th>Items</th>
<th>Unit</th>
<th>Compensation price</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power pole</td>
<td>Yuan/piece</td>
<td>1,000</td>
<td></td>
</tr>
<tr>
<td>Transformer</td>
<td>Yuan/set</td>
<td>15,000</td>
<td></td>
</tr>
<tr>
<td>Fruit tree</td>
<td>Yuan/piece</td>
<td>120</td>
<td>Adult</td>
</tr>
<tr>
<td></td>
<td>Yuan/piece</td>
<td>50</td>
<td>Young</td>
</tr>
<tr>
<td>Trees</td>
<td>Yuan/piece</td>
<td>8</td>
<td>Below 10cm</td>
</tr>
<tr>
<td></td>
<td>Yuan/piece</td>
<td>30</td>
<td>10cm-20cm</td>
</tr>
<tr>
<td></td>
<td>Yuan/piece</td>
<td>60</td>
<td>Above 20cm</td>
</tr>
<tr>
<td>Simple house</td>
<td>Yuan/set</td>
<td>6,000</td>
<td></td>
</tr>
</tbody>
</table>
9 RESETTLEMENT AND REHABILITATION

9.1 Resettlement and income recovery plan for people affected by land acquisition of the project

The WWTP of the project will occupy 12 hectare of paddy land owned by Gujia village of Panshan county of Panjin. The village has 13 villager teams in total. The land acquisition of the project will affect the No. 9 and No. 11 teams. The No. 9 team has 233 people with 262 Mu paddy land and the No. 11 team has 97 people with 127 Mu paddy land. The villager congress of the village stipulated that land will be reallocated within individual team every 5 years. And the village doesn’t have reserved lands, all lands of the village have been distributed to individual team. Lands were reallocated within the village in 1998 when Panjin Liaohe Fertilizer Plant requisite about 100 Mu lands of the village. And lands contract were renewed within the village in 2000 that means that affected people can’t re-get their lands by lands reallocation until 2005. In order to ensure the living level of affected people don’t drop off, the village planed to adopt the following resettlement ways:

A The village will help the affected people to adjust agricultural production structure by use of land compensation and labor resettlement subsidy, for example developing greenhouses and planting the vegetables with give higher economic benefits. The resellers have had experiences in planting in the greenhouse before. Training may be needed when necessary.

B The village now have 3 collective enterprises which are Panjin Paints Plant, Panjin Chemical Plant, Panjin Prefabricated Concrete Board Plant. Employers worked in these enterprises can earn 4,000-6,000 Yuan income in a year. The affected people can be arranged to go into these enterprises for working.

C In addition, the village plan to construct a new Brick Plant for resettlement of affected people.

D At present about 400 people of the village worked in Loading Brigade of the Panjin Ethylene Plant which is close to the village. People worked in the plant can get 6000-7000 Yuan income in a year. The village plan to arrange some affected people to go to the plant to work.

After implementation of the above resettlement ways, income level of the affected people won’t drop off due to the project.

9.2 Rehabilitation and reconstruction plan for affected infrastructures and ground attachments

The owner will be responsible for rehabilitation and reconstruction by themselves after being paid the compensation for affected infrastructures and ground attachments determined based on market price.
10 ENVIRONMENTAL PROTECTION

More attention will be paid to environmental protection during the implementation of land acquisition, ground attachments demolition and interception construction.

10.1 The environment around Gujia village of Panshan county

After PAPs get compensation and resettled, their productive and living level will improve to a certain extent. Administration committee of Gujia village will improve infrastructure and beautify residential environment by using the compensation.

10.2 Clean up of dismantled houses

All kinds of garbage produced by interception construction and demolition of ground attachments structures demolition will be cleaned up and dumped to the place appointed by Panjin Urban Appearance Administration Department.

10.3 Policy eliminating environment impacts caused by sewers construction

- Sewers are mainly installed along Shuangtaizi River and Liuli River, so traffic will not be affected largely by sewers construction. The construction of sewers along road will stagger the rush hour as possible.
- Measures relieving dust: Air borne dust in dry weather condition due to excavated soil stockpiled on the side of road will affect the surrounding entities and people. In order to relieve the impacts during construction period, water will be sprayed on excavated soil in fine or windy day to avoid dust raising. The waste soil will be disposed appropriately in time and over-loading during delivery to outside will be avoided. The construction site and hauling route will be cleaned up timely.
- Noise controlling: Construction noise produced by excavation, vehicle bugle, engine, concrete mixing and road roller will affect the surrounding residence. To relieve these noise impacts construction is forbidden within 200 m distance from residential areas during 11 o’clock at night to 6 o’clock in the morning. In addition equipment with low noise will be adopted as possible. In case of urgent construction at night affecting the surrounding residence noise-relieving measures should be taken and the noise intensity should be controlled within 40–60 dB, at the same time noise isolator around construction site will be installed to ensure the acoustic environment in residential areas.
- Solid waste disposal in construction site: The owner and construction unit of the project should contact with the local sanitary department to clean up solid waste timely to ensure the cleaning at construction site.
11 PUBLIC PARTICIPATION AND CONSULTATION

11.1 Strategy of public participation

Public participation and consultation will be paid much more attention in this project. And comments and suggestions of PAPs were collected extensively and considered during the process of resettlement planning and implementation so that appropriate arrangements for resettlement are in place which meet PAP needs and desires wherever possible, and which protects the legal rights of affected entities and individuals. Complaints and grievance of PAP are to be avoided and reduced as possible through implementation of consultation processes.

In the feasibility study stage of the project the staffs of project construction headquarter made many surveys on opinions and comments of municipal and each district government, people's congress, political consultation congress, public communities, PAPs for sewers route, location and plan of WWTP and land acquisition and resettlement. The survey results are analyzed and put into the report. Table 11-1 shows the general information on public participation and consultation of the project.

Opinions and comments of villagers of Gujia village were inquired and collected during the preparation of the report. In November 2001 a general conversation and discussion meeting with affected villagers, cadre and woman representatives of Gujia village was hold in which project information was introduced and their opinions were collected. In January 2002 land acquisition announcement will be issued. At the same time concerned policies, regulations, compensation standard, resettlement plan were introduced and explained to affected people. Many interviews and discussions with PAPs will be hold during the implementation of land acquisition so that their opinions for the project are acquired and learned. In March 2000 under the guidance and help of Administration Committee of Gujia village, Land Administration Bureau of Danshan County, Land Administration Bureau of Panjin, by democratic negotiation, The Gujia village initially determined a resettlement plan of people affected by land acquisition. Notification on inquiring social opinions and comments to Panjin Wastewater Treatment Project is planed to advertised in local newspaper in March 2002.

Public participation and consultation will be encouraged and strengthened by using the following ways in the future:

(1) PAPs will participate in the process of land acquisition and resettlement.

Representatives of affected people will participate in the process of land acquisition, survey of ground attachments to be dismantled, identification of compensation standard, negotiation and implementation of resettlement and compensation agreements to ensure the full consideration of PAP's interests and opinions and to guarantee the fair, reasonable and transparency of demolition and resettlement.

(2) The policies concerning land acquisition and demolition will be disclosed and propagated by public media.

(3) Issuing public announcement of land acquisition

The contents of public announcement will include at least: brief introduction of the project, land acquisition scope, resettlement policy (including compensation standard), organizations, demolition and resettlement schedule, rights and obligation of PAPs, complaints and grievance, monitoring and evaluation of the implementation etc.

(4) After being reviewed and approved by the World Bank the resettlement action report will be kept in Panjin Urban Drainage Management Liability Company to ensure the report is available to be read by anyone who is interested in the project.
(5) After the resettlement action plan report being approved by the World Bank, Panjin Project Construction Headquarter will summarize a resettlement manual which will be distributed to each PAP.
Table 1-1 Public participation information

<table>
<thead>
<tr>
<th>Date</th>
<th>Site</th>
<th>Attending people</th>
<th>Topic</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>25-29 July</td>
<td>Administration Committee of Gujia village</td>
<td>Part of villagers and staffs of Panjin Project Headquarter</td>
<td>Inquiring the opinion &amp; comments of people affected by land acquisition on environmental impacts of WWTP construction and compensation and resettlement way.</td>
<td>The construction of WWTP will improve the overall environment of the city largely. All people expressed to support the project and hope to be given compensation according to national and local concerned policies.</td>
</tr>
<tr>
<td>August 2001</td>
<td>Project Construction Headquarter</td>
<td>Concerned staffs of Panjin LAB, Gujia village and Project Construction Headquarter</td>
<td>Opinions of affected villagers to land acquisition was inquired and labor resettlement plan was negotiated.</td>
<td>Get a initial agreement</td>
</tr>
<tr>
<td>September 2001</td>
<td>Publish “Public participation advertisement” in local newspaper</td>
<td>The whole citizen</td>
<td>Inquiring public opinion and comments on the project construction</td>
<td>Letters and calls were received from some citizens, they expressed to support the project but hope to take measures to reduce adverse impacts.</td>
</tr>
</tbody>
</table>

11.2 Public opinion survey

On July 2001 Project Construction Headquarter carried out a survey of socioeconomic condition and public opinions. 20 households affected by or benefit from the project were solicited on their opinions to the project and resettlement. The results of opinion poll show: that 65% of sampling households think that urban wastewater harm seriously people’s living and working; 100% of sampling households are aware of the project, and 90% agree and support the project; 90% of sampling households are aware of or partially understand the policies of land acquisition, resettlement and compensation; 90% of the sampling households think that the project will benefit the state; 85% think that the project will benefit the collective; 70% think that the project benefit to individuals; 70% know that they can appeal to concerned department when their rights are infringed. Table 11-2 shows the details of the survey.
<table>
<thead>
<tr>
<th>Questions</th>
<th>Answers</th>
<th>Households</th>
<th>Results %</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you know that the project will begin to construct?</td>
<td>(1)Yes (2)Know a little about it (3)No</td>
<td>20 70 30 0  / /</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you agree and support the project?</td>
<td>(1)Yes (2)No (3)Indifference</td>
<td>20 90 4 6  / /</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Who will benefit from the project? (multiple choices)</td>
<td>a) State (1)Yes (2)No</td>
<td>20 90 10  / /</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>b) Collective (1)Yes (2)No</td>
<td>20 85 15  / /</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>c) Individuals (1)Yes (2)No</td>
<td>20 70 30  / /</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you know which potential hazard will be made by urban wastewater?</td>
<td>(1) Economic loss (2) Deterioration of living environment (3) Do harm to resident health (4) Affect investment environment (5) Smear the images of Panjin city</td>
<td>20 90 80 70 60 65</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To what degree does the urban wastewater affect your work and life?</td>
<td>(1) No impacts (2) Not seriously (3) Rather seriously (4) Seriously</td>
<td>20 5 30 50 15  /</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Which benefit do you think that you can get from the project?</td>
<td>(1) Improve living environment (2) Improve working environment (3) Provide employment opportunity (4) Benefit health of body and mind</td>
<td>20 80 60 40 50  /</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Which adverse impacts do you think that the project make on you?</td>
<td>(1) No adverse impacts (2) Affect traffic conditions (3) Economic loss caused by house demolition (4) Possible income decreasing caused by land acquisition (5) Other adverse impacts</td>
<td>20 70 20 40 20  /</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you know the policies on land acquisition, demolition, resettlement and compensation?</td>
<td>(1) Yes (2) Know a little about (3) No</td>
<td>20 60 30 10  / /</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you know that you can appeal when your rights are infringed?</td>
<td>(1) Yes (2) No</td>
<td>20 85 15  / /</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
12 GRIEVANCES AND APPEALS

Special attention will be paid to the participation of individuals and entities affected by the project throughout the process of compilation and implementation of the RAP. Transparent and efficient grievance redressing procedure is established for the project as follows:

- **Stage I**
  If people or entities affected by the project are dissatisfied with the RAP and implementation of RAP, they can appeal to concerned departments orally or in writing. And concerned department should settle the grievance within 2 weeks.

- **Stage II**
  If people or entities affected by the project are dissatisfied with the solution of stage I, they can then appeal to Panjin Wastewater Treatment Project Construction Office. And the Project Construction Headquarter should make a decision on complaint within 2 weeks.

- **Stage III**
  If people, shops or entities affected by the project are still dissatisfied with the solution of stage II, they can appeal to Panjin Urban and Rural House Demolition and Resettlement Office (organization in charge of the implementation, monitoring and arbitration of house demolition) and Panjin Land Administration Bureau (the organization in charge of monitoring and arbitration of land acquisition) and submit the dispute for arbitration. The arbitration organization will make arbitration on the complaint within 10 days.

- **Stage IV**
  If people, shops or entities affected by the project are still dissatisfied with the arbitration, they can appeal to the people's court in accordance with the administration procedure law of PRC after receiving the decision of the arbitration organization. The people, shops or entities affected by the project can make an appeal on any issues of resettlement.

The PAPs will be informed of the procedures above mentioned grievance redressing through meetings and other ways to ensure that they are clear about their rights of grievance and appeals and can protect their own rights.
13 IMPLEMENTATION SCHEDULE OF RESETTLEMENT ACTIVITIES

13.1 Coordination of resettlement implementation and project construction

According to the project construction schedule, the construction of Panjin Shuangtaizi Wastewater Treatment Plant will begin to construct in June 2002 and will be completed in October 2004. The schedule of land acquisition, house demolition and resettlement should be determined according to project construction schedule.

The basic principles to ensure the progress of land acquisition, house demolition and resettlement fit to the project construction progress is showed as follows:

- The schedule of land use of the project will be determined according to the schedule of sewers construction and treatment plant construction respectively.
- Sufficient time should be left for land acquisition and resettlement before project construction beginning.
- Land acquisition shall be completed one month before land use of project. The Joint schedules of project construction and land acquisition are showed in table 13-1.

<table>
<thead>
<tr>
<th>Item</th>
<th>Date of construction</th>
<th>Date of land acquisition and demolition</th>
<th>Date of resettlement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2004.10</td>
<td>2002.3</td>
<td>2002.3</td>
</tr>
</tbody>
</table>

13.2 The schedule of resettlement activities

13.2.1 Principles of identification of resettlement activities schedule

- The scope of land acquisition and house demolition of the project should be determined according to the design drawing of each engineering item before the inventory survey on the land acquisition and house demolition are made.
- Before the compensation agreement are signed, the survey and calculation of tangible materials affected by land acquisition and house demolition will be carried out according to the red line drawing of land acquisition and demolition by both the owners of affected properties and staffs of Panjin Project Construction Headquarter.
- The payment of compensation will be finished after agreement signed and before the implementation of house demolition.
- The implementation of compensation and resettlement will be monitored and supervised to ensure the satisfaction of people and entities affected by the project.

13.2.2 Schedule of land acquisition, house demolition and resettlement

Table 13-2 and 13-3 show the schedule of land acquisition, demolition and resettlement made according to the above mentioned principles.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Xinglongtai WWTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>To identify the scope of land acquisition</td>
<td>2001,10</td>
</tr>
<tr>
<td>To check the inventory survey results</td>
<td>2001,11</td>
</tr>
<tr>
<td>Holding mobilization meeting and announcing relevant policies</td>
<td>2001,11</td>
</tr>
<tr>
<td>Issuing land acquisition announcement</td>
<td>2002,1</td>
</tr>
<tr>
<td>To negotiate and sign the agreement of compensation and resettlement</td>
<td>2002,2</td>
</tr>
<tr>
<td>Payment of compensation</td>
<td>2002,3</td>
</tr>
<tr>
<td>Project Description</td>
<td>Year</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Reconstruction and rehabilitation of infrastructure</td>
<td>2002,3</td>
</tr>
<tr>
<td>Diversion of water irrigation channel</td>
<td>2002,3</td>
</tr>
</tbody>
</table>
14 COST AND BUDGET FOR COMPENSATION

14.1 Cost

All cost incurred in land acquisition, demolition and resettlement will be included in the overall budget of the project. Calculated at the price in October 2001, the total cost of land acquisition, demolition and resettlement of the project is RMB 15,528,670 Yuan.

14.1.1 Basic cost

Basic cost includes compensation for permanent land acquisition, demolition of ground attachments.

14.1.2 Management fee

3 percent of basic cost should be used as project management fee which will be used for activities relating to land acquisition, demolition and resettlement such as equipment procurement, transportation, meeting, communication, trip and handling official business.

14.1.3 Contingencies fee

10% of basic cost will be used as contingency cost which comprise of material contingency and price contingency. The material contingency fee is prepared to pay the additional costs resulted from the changes in project design and affected tangible materials during the implementation of RAP. The price contingency is prepared with mainly considering the inflation and changes in price during the implementation of RAP. The estimation of contingency cost mentioned above is based on the price in October 2001.

14.1.4 Survey and design cost

2% of basic cost is used as cost of survey and design.

14.1.5 Monitoring and evaluation costs

2% of basic cost is spent as monitoring and evaluation costs.

Table 14-1 shows the total budget and cost for land acquisition, demolition and resettlement of Panjin Shuangtaizi WWTP.
Table 14-1 Cost for land acquisition and demolition activities

<table>
<thead>
<tr>
<th>Category</th>
<th>Unit</th>
<th>Quantity</th>
<th>Unit price(Yuan)</th>
<th>Total (Yuan)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Permanent land acquisition</td>
<td>Paddy land</td>
<td>hectare</td>
<td>12.15</td>
<td>1,063,920</td>
</tr>
<tr>
<td>(WWTP and pumping station)</td>
<td></td>
<td></td>
<td></td>
<td>12,926,628</td>
</tr>
<tr>
<td>2. Ground attachments</td>
<td>Power pole</td>
<td>Piece</td>
<td>56</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>56,000</td>
</tr>
<tr>
<td></td>
<td>transformer</td>
<td>Piece</td>
<td>3</td>
<td>15,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>45,000</td>
</tr>
<tr>
<td></td>
<td>Simple house</td>
<td>Set</td>
<td>6</td>
<td>6,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>36,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Trees</td>
<td>Below 10 cm</td>
<td>Piece</td>
<td>1,230</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10-20 cm</td>
<td>Piece</td>
<td>1,500</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Above 20 cm</td>
<td>Piece</td>
<td>2,500</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>150,000</td>
</tr>
<tr>
<td></td>
<td>Fruit trees</td>
<td>Adult</td>
<td>20</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Young</td>
<td>30</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1,500</td>
</tr>
<tr>
<td></td>
<td>Sub-total of basic cost</td>
<td></td>
<td></td>
<td>13,272,368</td>
</tr>
<tr>
<td>3. Management fee</td>
<td></td>
<td></td>
<td></td>
<td>398,171</td>
</tr>
<tr>
<td>4. Survey and design cost</td>
<td></td>
<td></td>
<td></td>
<td>265,447</td>
</tr>
<tr>
<td>5. Monitoring and evaluation cost</td>
<td></td>
<td></td>
<td></td>
<td>265,447</td>
</tr>
<tr>
<td>6. Contingency</td>
<td></td>
<td></td>
<td></td>
<td>1,327,237</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td>15,528,670</td>
</tr>
</tbody>
</table>

14.2 Yearly expenditure plan

Table 14-2 shows the yearly expenditure plan made according to the implementation schedule of land acquisition and house demolition.

Table 14-2 Expenditure plan for land acquisition and house demolition

<table>
<thead>
<tr>
<th>Year</th>
<th>2002</th>
<th>2003</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount</td>
<td>3,105,734</td>
<td>12,422,936</td>
<td>15,528,670</td>
</tr>
<tr>
<td>Percentage (%)</td>
<td>20</td>
<td>80</td>
<td>100</td>
</tr>
</tbody>
</table>

14.3 Fund source

The fund for project land acquisition and demolition will all come from Panjin municipal finance.
14.4 Compensation funds flowing

Figure 14-1 shows the compensation funds flowing.

```
Financial funds
  ↓
Panjin Project Construction Leading Group
  ↓
Panjin Project Construction Headquarter
  ↓
Land Administration Bureau of Panshan County
  ↓
Gujia village
  ↓
Land contractor
```

Figure 14-1 Compensation funds flowing
15 MONITORING AND EVALUATION

According to OP4.12 of the World Bank, the implementation of land acquisition, house demolition and resettlement activities should be monitored regularly to ensure those actions proceed in accordance with the provision in RAP and realize the resettlement objective. There are two kinds of monitoring mechanisms for resettlement actions that are internal monitoring and the external monitoring carried out by an independent institution.

The internal monitoring is carried out by LUCRPO, Panjin Project Construction Quarter, Panjin LAB, LAB of Panshan county to ensure that the schedule and principles in the RAP will be followed. The purpose of internal monitoring is to make the resettlement organizations fulfill their duties efficiently during the implementation of the RAP.

Independent monitoring organization is responsible for conducting independent monitoring and evaluation on activities of land acquisition, demolition and resettlement regularly. Resettler Research Center of Hehai University is invited to undertake the independent monitoring of the following contents of the project:
- Operational efficiency of resettlement network;
- Progress and compensation of land acquisition, demolition and rehabilitation and resettlement;
- Investigation and analysis of living level of PAPs;

A independent organization is entrusted to monitor and evaluate externally the implementation of RAP from an overall and long-term point of view. Independent monitoring organization will follow the resettlement activities of the project closely to evaluate whether the goals of resettlement are achieved. The evaluation criteria include:
- To follow national laws and regulations relevant to land acquisition, demolition and resettlement;
- To comply with the principles of OP4.12 on involuntary resettlement of the World Bank;
- To help PAPs to improve their living standard or at least to restore it to the level before the project.

The independent monitoring organization should provide suggestions about the RAP implementation to concerned institute so as the problems incurred during the implementation of RAP can be resolved without delay.

15.1 Internal monitoring and evaluation

Panjin Wastewater Treatment Project Construction Headquarter will develop an internal monitoring system to check the resettlement activities and establish a basic database on resettlement activities which is used to compile the RAP and to monitor and evaluate the affected people. And also the whole course of resettlement preparation and implementation will be monitored and evaluated internally.

15.1.1 Implementation procedure

During the implementation of RAP, Panjin project construction headquarter, Panjin Land Administration Bureau, Land Administration Bureau of Panshan county will collect and record the information of people affected by the project according to the samples provided by monitoring organizations. At the same time, they will report the current activities' record timely to Project Construction Headquarter so as to ensure a continuous monitoring on implementation. Panjin Project Construction Headquarter will check regularly the implementation of RAP and report the progress to the higher authorities concerned.

In the internal monitoring system mentioned above, unified form will be made in order to realize continuous information flowing. Panjin Project Leading Group, Panjin Project Construction Headquarter, Land Administration Bureau, Land Administration Bureau of Panshan County as the important components of internal monitoring system should carry out regular inspection and verification on the implementation of RAP.
15.1.2 Tasks of monitoring

- Payment of compensation to affected people and entities;
- Resettlement of people affected by the project;
- The schedule of the above monitored activities;
- Conformity with the policy and regulation of RAP;
- Community participation and consultation during the implementation of RAP;
- Staffing, training, working schedule and working efficiency of resettlement institutions;

15.1.3 Internal monitoring and evaluation report

Land Administration Bureau of Panshan county and Panjin Project Construction Headquarter should prepare and submit the progress report of resettlement implementation to LUCRPO by which the report will be sent to the World Bank for review.

15.2 Independent monitoring system

Independent monitoring will be carried out based on the census date provided in the RAP and by resettlement implementation organization.

15.2.1 Independent monitoring organization (IMO)

Panjin Project Construction Headquarter invited Resettler Research Center of Hehai University (RRCOHU) to carry out the external monitoring and evaluation of the project. The independent monitoring team comprises of resettlement specialists who has rich experiences on resettlement policy and social evaluation and management etc.

15.2.2 Duties

RRCOHU should follow, monitor and evaluate the implementation of RAP. And it should provide advice and suggestions on progress, quality and funds of resettlement and provide external monitoring and evaluation report to project office and the World Bank.

15.2.3 Monitoring and evaluation procedure

(1) To compile the outline of independent monitoring and evaluation;
(2) To develop monitoring and evaluation information system software;
(3) To prepare and compile survey outline and questionnaire and recording card of affected entities;
(4) To work out sampling survey plan
(5) To carry out baseline survey to get the basic information of people and entities affected by the project;
(6) To establish monitoring and evaluation information system;
(7) To conduct monitoring and survey with
   - Socioeconomic survey;
   - Working capacity and efficiency of resettlement implementation organization;
   - To monitor sampling PAP households on the compensation and resettlement quality;
   - Public consultation: To take part in the consultation activities during RAP compilation and implementation and to monitor the quality of public consultation;
   - Appeal and grievance
   - Re-cultivation of temporarily used land
(8) Collection of monitoring information and establishment of database;
(9) Comparison and analysis;
(10) To prepare monitoring and evaluation report once a year;

In October 2002 to complete the baseline survey and the first monitoring and evaluation report;
In October 2003 to complete the second monitoring and evaluation report;
In October 2004 to complete the third monitoring and evaluation report;
In October 2005 to complete the post assessment of resettlement;

15.3 Monitoring index

- Socioeconomic index: per capita income, Gross Domestic Product, employment rate;
15.4 Post assessment

After the project finished post assessment of the project will be conducted based on the monitoring and evaluation to assess the successful experiences and lessons from the project. Panjin Project Construction Headquarter will invite external independent monitoring institute to conduct the post assessment of the project. They will firstly compile an outline of post assessment work and establish a assessment index system, then make a socioeconomic survey and analysis. Secondly they will prepare a post assessment report on resettlement of Project Wastewater Treatment Project and present it to LUCRPO and the World Bank.
### 16 ENTITLEMENT MATRIX

<table>
<thead>
<tr>
<th>Impact type</th>
<th>Affected people and entities</th>
<th>Compensation and resettlement policy</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporary collective land use</td>
<td>Land contractor</td>
<td>Young crops and restoration cost</td>
<td>21,750 Yuan/hectare</td>
</tr>
<tr>
<td>Permanent land acquisition</td>
<td>village</td>
<td>Getting land compensation and labor resettlement subsidy; Restoring the affected people’s living level by using the compensation; investing the compensation fund under the agreement of 2/3 majority of villagers</td>
<td>1,063,920 Yuan/hectare</td>
</tr>
<tr>
<td>Land contractor</td>
<td>Getting the compensation for young crops</td>
<td></td>
<td>21,750 Yuan/hectare</td>
</tr>
<tr>
<td>Ground attachments</td>
<td>Owner of affected ground attachments</td>
<td>Power pole</td>
<td>1,000Yuan / piece</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transformer</td>
<td>15,000Yuan/piece</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Simple house</td>
<td>6,000 yuan/set</td>
</tr>
<tr>
<td></td>
<td>Fruit trees</td>
<td>Adult</td>
<td>120 Yuan/piece</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Young</td>
<td>50 Yuan/piece</td>
</tr>
<tr>
<td></td>
<td>Trees (poplar and willow)</td>
<td>Below 10cm</td>
<td>8 Yuan/piece</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10~20cm</td>
<td>30 Yuan/piece</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Above 20cm</td>
<td>60 Yuan/piece</td>
</tr>
</tbody>
</table>