Ethnic Minority Development Plan

November 2017

PRC: Guiyang Integrated Water Resources Management (Sector) Project

Ethnic Minority Development Plan for the Hongyan Reservoir and Associated Waterworks Subproject

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Ethnic Minority Development Plan for the Hongyan Reservoir and Associated Waterworks Subproject (Updated)

Guiyang Water Resources & Transport Development & Investment (Group) Co., Ltd.

November 2017
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Abbreviations

ADB - Asian Development Bank
EMDP - Ethnic Minority Development Plan
EMP - Environmental Management Plan
FGD - Focus Group Discussion
HD - House Demolition
LA - Land Acquisition
M&E - Monitoring and Evaluation
PMO - Project Management Office
PRC - People’s Republic of China

Units

Currency unit = Yuan (CNY)
USD1.00 = CNY6
1 hectare = 15 mu
Endorsement Letter

The Peoples' government of Guiyang Municipality, through the Ministry of Finance, applied for a loan from the Asian Development Bank (ADB) to implement Guiyang Integrated Water Resources Management (Sector) Project (hereinafter, the "Project"). Therefore, the implementation of the project should be in accordance with the Safeguard Policy Statement of ADB.

An Ethnic Minority Development Plan (EMDP) has been prepared and updated for the Hongyan Reservoir and Associated Waterworks Subproject under the Project. The EMDP fully complies with requirements of the relevant laws, regulations and policies of People's Republic of China, Guizhou Province as well as complies with ADB's Indigenous Peoples Policy.

On behalf of Guiyang Municipality Government, the Huaxi District Government and Guiyang Zhushui Water Resource Industrial Development Co., Ltd. hereby acknowledges the contents of this EMDP to promise to supervise all relevant local governments to implement the EMDP in a timely manner. And it's committed by the Huaxi District Government and Guiyang Zhushui Water Resource Industrial Development Co., Ltd. that the progress and performance of the implementation of EMDP will be monitored and reported to ADB regularly as requirements of ADB.

<table>
<thead>
<tr>
<th>Agency (Seal)</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Huaxi District Government</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guiyang Zhushui Water Resource Industrial Development Co., Ltd.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Revision Statement

After a long period of careful and detailed preparatory work, the Guiyang Municipality Government has made the decision to construct the Mengguan Water Treatment Plant (WTP) under Hongyan Reservoir and Associated Waterworks Subproject. As required by ADB, the original Ethnic Minority Development Plan (EMDP) (that was approved in 2015) needs to be updated to incorporate the contents of Mengguan WTP. Since the benefit and impact areas of the WTP are included in the same project areas in the original EMDP, no additional ethnic minorities will be involved in the Hongyan Reservoir and Associated Waterworks Subproject (the Subproject) after the incorporation of Mengguan WTP. The original EMDP action plan is currently being implemented for the original components under the Hongyan reservoir and other associated water facilities subproject, and that external social monitoring reports have been submitted and disclosed as well (the latest having been posted in October 2017).

Therefore, the updating of this EMDP only focused on followings items:
   i) including the Mengguan WTP in the contents of the Subproject;
   ii) including the land acquisition and resettlement and related impacts of Mengguan WTP in the negative impacts of the Subproject;
   iii) incorporating the main contents of RP and related measures of Mengguan WTP in the updated EMDP.
Executive Summary

A. Overview

The Guiyang Integrated Water Resources Management Project was planned to support a variety of activities to improve provision of water in rural and urban areas of the municipality. The project supports construction of new reservoirs and water supply infrastructure, irrigation system rehabilitation, and soil and water conservation, together with development of management institutions for assuring improved delivery of water services and integrated management of water for social, economic, and environmental objectives. Originally, the project was planned to include 66 subprojects with six core subprojects selected during PPTA: Yudongxia Reservoir Urban Water Supply Subproject, Jinlong Reservoir County Water Supply Subproject, Liaojiuzhai Reservoir Water Supply and Irrigation Subproject, Wudang District Midsize Irrigation System Rehabilitation Subproject, Xifeng County Small-scale Water Storage Subproject, and Huaxi Reservoir Soil and Water Conservation Subproject. On the basis of the review of six selected core subprojects by PPTA consultant and Guiyang Project Management Office (GPMO), four core subprojects had prepared ethnic minority development plans. Ethnic minority development plans for Yudongxia and Jinlong Reservoirs, Wudang Irrigation Rehabilitation and Water and Soil Conservation were prepared as part of the project preparation. Because the project was a sector project, an Indigenous Peoples Development Framework (IPDF) had been prepared by GPMO and PPTA consultant and approved by ADB during the project preparation.

Hongyan reservoir and Mengguan water treatment plant (WTP) was listed as a new none-core subproject of the Guiyang Integrated Water Resources Management Project. The composition of subproject: The Hongyan Reservoir and Associated Waterworks Subproject (hereinafter referred to as the “Subproject”) in Guiyang City consists of a water source junction, water supply works and irrigation works, and Mengguan WTP. The scope of subproject: The Subproject is designed for urban water supply and irrigation. After its completion, it will supply 31.9 million m³ of domestic water (P=95%) and 1.09 million m³ of irrigation water (P=80%) to Guiyang City annually, with a design irrigated area of 3,060 mu, an installed capacity of 800kW and average annual generated energy of 2.93 million kWh. The scale: Class III medium-sized reservoir. The operating mode: The Subproject supplies urban domestic and irrigation water mainly, and also generates power.

According to the FSR and statistics data, there are two ethnic minority communities including Buyi and Miao in the subproject areas. Ethnic minority people will be both adversely and positively affected in the project areas. The Hongyan Reservoir and Mengguan WTP sub-project triggered the ADB's Indigenous Peoples' policy (1998). In order to enhance project benefits and take remedial actions for adverse impacts for ethnic minority, EMDP needed to be prepared in 2015 and now updated after finalization of the WTP component under the subproject.

B. Overview of Ethnic Minorities in the Subproject Area

The subproject area is divided into a beneficiary area and an affected area. The beneficiary area has 24,478 households with 103,323 persons, including 20,094 minority residents, accounting for 19.45%, including 5,597 Miao people and 8,317 Buyi people. In the beneficiary area, Maling Village has 1,214 households with 4,956 persons, including 345 minority households with 1,325 persons, mostly Buyi and Miao people, which account for 95% of minority population. In the inundated area, 518 households with 2,030 persons will be affected, including 429 minority

1 The sector project was approved before SPS became effective.
residents, accounting for 21.13%. In minority population, there are 156 Miao people, accounting for 36.36%; and 273 Buyi people, accounting for 63.63%. In the junction construction area, 152 households with 555 persons will be affected, including 61 minority residents, accounting for 10.99%. In minority population, there are 31 Miao people, accounting for 50.82%; and 30 Buyi people, accounting for 49.18%.

C. Impacts of the Subproject on Ethnic Minorities

Positive impacts: 1) meeting urban water supply demand, improving the investment environment, and promoting local economic development; 2) meeting the irrigation demand of surrounding areas, ensuring irrigation stability and continuity, and promoting agricultural restructuring; 3) offering job opportunities to increase income; 4) improving population quality through education and training; and 5) promoting the development of ecological tourism for expanded benefits.

Negative impacts and risks: 1) Risks of LA, HD and resettlement, Livelihood model would be changed: 624.83 mu of cultivated land and 980.62 mu of woodland, and houses of 37,972.56m² will be inundated for the Hongyan Reservoir Subproject component, affecting 984 persons; 497.30 mu of land will be acquired in the junction component construction area; and the Mengguan WTP component will occupy 58.68 mu of land in total, among which 41.93 mu of land for the Mengguan WTP, 13.75 mu of land for access road and 3 mu of land for the high-water-level pond, affecting 8 households and 25 persons; 2) construction safety risks, including safety risks for construction workers and nearby residents; 3) health risks from work sheds; 4) risks of supply of domestic and irrigation water for downstream residents; 5) risk of unacceptable water quality of the water source; and 6) environmental and public security risks from floating population; and 7) The cultural identity of ethnic minorities and community cohesion will be affected to some extent.

D. Social and Gender Development Conditions

The socioeconomic survey shows that educational levels of local women are relatively low, and the proportion of minority women speaking Putonghua (mandarin Chinese) is much lower than that of men. In the subproject area, most farm work is done by women, and their level of participation in public affairs is low.

At the construction and operation stages, not less than of 30% unskilled jobs should be first made available to local vulnerable groups, including women and ethnic minorities. Training offered under the Subproject should meet women’s needs for time and mode. Women should be encouraged to participate in the Subproject and local public affairs.

E. Ethnic Minority Development Plan

On the basis of adequate consultation with all stakeholders, a feasible action plan has been developed to promote ethnic minority development, enhance positive impacts and mitigate negative impacts, and specific actions, implementing agencies, times, funding sources and M&E indicators proposed for target groups. See Chapter 6 and Table 6-1.

F. M&E

In order to ensure that this EMDP is implemented effectively as expected, it is necessary to monitor and evaluate the implementation thereof. EMDP monitoring includes internal and external monitoring, where internal monitoring will be performed by the PMO semiannually, and it will be reflected in quarterly reports. External monitoring will be performed semi-annually by an independent agency until subproject completion. See Table 7-1 for details.
1. Introduction

1.1 Overview of project

1.1.1 Project description

The Guiyang Integrated Water Resources Management Project was planned to support a variety of activities to improve provision of water in rural and urban areas of the municipality. The project will support construction of new reservoirs and water supply infrastructure, irrigation system rehabilitation, and soil and water conservation, together with development of management institutions for assuring improved delivery of water services and integrated management of water for social, economic, and environmental objectives.

Originally, the project was planned to include 66 subprojects with six core subprojects selected during PPTA: Yudongxia Reservoir Urban Water Supply Subproject, Jinlong Reservoir County Water Supply Subproject, Liaojuzhai Reservoir Water Supply and Irrigation Subproject, Wudang District Midsize Irrigation System Rehabilitation Subproject, Xifeng County Small-scale Water Storage Subproject, and Huaxi Reservoir Soil and Water Conservation Subproject. On the basis of the review of six selected core subprojects by PPTA consultant and Guiyang Project Management Office (GPMO), four core subprojects had ethnic minority development plans. Ethnic minority development plans for Yudongxia and Jinlong Reservoirs, Wudang Irrigation Rehabilitation and Water and Soil Conservation were prepared as part of the project preparation. Because the project was a sector project, an Indigenous Peoples Development Framework (IPDF) had been prepared by GPMO and PPTA consultant and approved by ADB.

1.1.2 Overview of the Hongyan Reservoir and Mengguan WTP Subprojects

Since University Cluster Zone and Xiaomeng Industrial Park in Huaxi District have been put into operation, there is an urgent demand for water resources. Guiyang Water Supply Company plans to construct Guiyang South Waterworks to meet local water demand and as the water source for the planned second phase of Guiyang South Waterworks to supply water to southern Guiyang. It has a water supply capacity of 36 million m$^3$ and a design irrigated area of 3,060 mu. The Hongyan water supply works consists of water source, water supply pipeline, WTP and irrigation works.

The dam of the Hongyan Reservoir is located 3-4km below the Gelou Hydropower Station on the Maling River, about 1.0km away from Hongyan Village. The Subproject consists of a water source junction, water supply works and irrigation works, being a backbone medium-sized water resources project in municipal planning, with an annual water supply capacity of 28.7 million m$^3$ and a peak storage capacity of 11.81 million m$^3$. The Subproject supplies urban domestic and irrigation water mainly, and also generates power from wastewater and environmental water. Its water supply range is the whole southern part of Guiyang City, while its irrigation area is in Maling Xiang only. Its mode of irrigation will be gravity irrigation from an elevated water tank at the level of 1,200m, and its range of irrigation will be 1,200m-1,080m around the water tank. The Subproject has a designed irrigated area of 3,060 mu, including 2,499 mu of irrigated land and 561 mu of non-irrigated land.

In the Hongyan Reservoir and Mengguan WTP, a waterworks and an associated water distribution network of 96.525km will be constructed in Guiyang High-tech Development Zone, with a design water supply capacity of 100,000 m$^3$/day, serving Mengguan and Qingyan Town, southern Huaxi District, Xiaohe-Mengguan Industrial Park, southern Ergezhai Town and the Xiaohe area.

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2The water supply range has no changes after incorporation Mengguan WTP in this subproject.
Mengguan WTP plans to construct a scale of 100,000 m³/d water supply system project. The project construction plan includes: The raw water of the project is accessed from Hongyan Reservoir, pressurized to the high pool and flow to Mengguan WTP. After the process of mixing, reaction, precipitation, filtration and disinfection, the water is pressurized by the pressure pump house of the factory and sent to the urban users. Guiyang Hongyan Reservoir project will be in charge of the construction work of reservoir and accessing water. It will also take charge of constructing the 22.5 km water pipes in the water conveyance. The component of Mengguan WTP will be in charge of the construction of the remaining 3.855 km, water purification facilities and water distribution facilities. The construction period is 2017-2018. The total investment of Hongyan Reservoir Associated Waterworks (including Mengguan WTP) is 398.4141 million yuan.

Since the benefit and impact areas are included in the same project areas in original EMDP, no additional ethnic minorities will be involved in the Hongyan Reservoir and Associated Waterworks Subproject (the Subproject) after the incorporation of Mengguan WTP.

![Figure 1 Locations of Hongyan Reservoir and Mengguan WTP](image)

According to the FSR and statistics data, there are two ethnic minority communities, including Buyi and Miao, in the project areas. Ethnic minority people will be both adversely and positively affected in the project areas. The Hongyan Reservoir and Mengguan WTP project addresses the ADB's Indigenous Peoples' policy (1998). In order to enhance project benefits and take remedial actions for adverse impacts for ethnic minority, EMDP needed to be prepared in 2015 and now updated with the WTP finalized.

In terms of beneficiaries, a large percentage will be Buyi and Miao. Within the service area of supplying water, the population of Miao and Buyi is 20094 with accounting for 19.45%. Within the service area of irrigation, the population of Miao and Buyi is 1259 with accounting for 25.4%. In terms of the affected area of land acquisition and house demolition, a large percentage will be
ethnic minorities. The inundated area will affect 429 Miao and Buyi residents with accounting for 21.13%. The junction construction area will affect 61 Miao and Buyi residents with accounting for 10.99%.

1.2 Objectives of the EMDP

According to the ADB’s Indigenous Peoples’ policy (1998), the policy objectives is to recognize the potential vulnerability of indigenous peoples in development processes, as well as ensure that indigenous peoples have opportunities to participate in and benefit equally from development, avoid negatively affecting indigenous people, and provide adequate and appropriate compensation when a negative impact is unavoidable. The ADB’s development efforts should ensure that development initiatives affecting indigenous peoples are effective and sustainable. Initiatives should be compatible in substance and structure with the affected peoples’ culture and social and economic institutions, and commensurate with needs, aspirations and demands of affected peoples. Initiatives should be conceived, planned, and implemented, to the maximum extent possible, with the informed consultation/consent of affected communities, and include respect for indigenous peoples’ dignity, human rights, and cultural uniqueness.

Strategies and approaches to development that affect indigenous peoples must include clear mechanisms for accurate, objective analysis of their circumstances. Development processes must incorporate transparency and accountability. The policy would apply to operations in both the public and the private sectors.

Referring to the ADB’s Policy objectives on Indigenous Peoples (1998), the EMDP of the Subproject aims to ensure that minority residents have equal opportunities to participate in and benefit from the Guiyang Integrated Water Resources Management (Sector) Project. Its objectives include: 1) providing all information related to the Subproject in a manner suited to local minority residents’ traditional cultures and customs, and conducting adequate consultation to learn their needs; 2) incorporating minority residents’ needs for the Subproject into the subproject design; and 3) taking measures and actions to minimize the Subproject’s potential negative impacts on minority residents, and enhancing their opportunities to benefit from the Subproject in ways acceptable to them.

This Ethnic Minority Development Plan has been prepared to ensure that ethnic minority people have opportunities to participate in and benefit equitably from the Guiyang Integrated Water Resources Management Project. It describes the measures to be undertaken in the subproject to improve livelihoods, reduce poverty, and to mitigate negative impacts, particularly those related to land acquisition and resettlement.

1.3 Research Methods

In order to prepare this EMDP, the EMDP preparation team conducted a series of public participation activities in the subproject area. 303 persons were sampled in the questionnaire survey, including 171 women, accounting for 56.43%, and 67 minority residents, accounting for 22.11%; two village-level FGDs were held, involving 26 persons in total (including 9 minority residents and 11 women); a stakeholder discussion meeting was held with municipal departments concerned; 7 key informant interviews were conducted.

1.4 Policy Framework

This Ethnic Minority Development Plan is based on the Ethnic Minorities Development Framework (EMDF) for the Guiyang Integrated Water Resources Management Project, and, as
discussed in the EMDF, on the relevant laws and regulations of the People’s Republic of China (PRC) and the Asian Development Bank Policy on Indigenous Peoples, including Policies and Procedures in the ADB Operations Manual. The PRC Constitution in 1949 established the legal equality of all ethnic groups. Government policies and regulations include a variety of measures to address the needs of ethnic people, including autonomous governments at various levels, special consideration in education, and funding to assist ethnic people. ADB policy is that “poverty reduction and improvement in the quality of life realized from development must be extended equitably and reach each segment of society, including indigenous peoples.”

The EMDP of the Subproject has been prepared in accordance with the applicable laws and regulations of the People’s Republic of China (PRC), the applicable regulations of Guizhou Province, and ADB’s Policy on Indigenous Peoples (1998). The main policies include the applicable laws and regulations of the PRC, the applicable regulations of Guizhou Province, the state supporting policy, the regional development plans of Guizhou Province and Huaxi District, and the ADB policy.

The policies and regulations of the PRC on ethnic minorities are in line with ADB’s concerns about ethnic minorities, i.e., to pay attention to the equality and development of ethnic minorities, and pay special attention to the development of their economic, social and cultural programs in order to maintain their rights and interests, and improve their socioeconomic status.

The policies the PRC and ADB are focused on public participation, consultation and the action plan. At the preparation, implementation and monitoring stages of the Subproject, the ethnic minorities’ opinions, attitudes and expectations should be taken into account seriously. This requires that attention should be paid to public participation during the whole lifecycle of the Subproject, especially women, the poor and other vulnerable groups, to ensure that they can benefit from the Subproject.

<table>
<thead>
<tr>
<th>Category</th>
<th>Name of policy/ regulation</th>
<th>Contents and key points</th>
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<tbody>
<tr>
<td>State laws and regulations,</td>
<td>Constitution of the People’s Republic of China, Law of the People’s Republic of China on</td>
<td>① In addition to the same powers as local governments, the authorities of the localities of ethnic autonomy also have the following rights: autonomous legislative power; autonomy in the administration of local political, economic, financial, scientific, educational and cultural affairs, the right to organize local public security forces, and the right to use and develop ethnic minority languages, etc.</td>
</tr>
<tr>
<td>regulations of Guizhou Province</td>
<td>Regional Ethnic Autonomy, Law of Organization of Villager Committee of the People’s Republic of China, Regulations on Urban Ethnic work, Regulations on the Administrative Work of Ethnic Minority Xiang and Towns of the People’s Republic of China, the Thirteen Five-year Plan for Ethnic Minority Programs Regulations of Guizhou Province: Working Regulations on Law of the People’s Republic of China on Regional Ethnic</td>
<td>② Citizens of the People’s Republic of China shall have freedom in religious belief, and the state and the authorities of the localities of ethnic autonomy shall guarantee such freedom for citizens of all ethnic groups.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>③ Administrative regulations for ethnic minorities shall be formulated to promote the development economic and cultural programs of ethnic minority Xiangs, protect the lawful rights and interests of ethnic minorities, and enhance the unity among different ethnic groups.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>④ Except those deprived of political rights, villagers attaining 18 years of age, regardless of ethnic group, race, sex, occupation, family background, religious belief, education, property condition or term of residence, shall have the right to vote and the right to be elected.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>⑤ The state shall support all ethnic minorities financially, materially</td>
</tr>
</tbody>
</table>
| **Autonomy of Guizhou Province, Measures on Implementing the Regulations on the Administrative Work of Ethnic Minority Xiang and Town, Measures on Implementing the Regulations on the Administrative Work of Ethnic Minority in City** | **and technically to accelerate their economic development, cultural and other social programs.**

⑥ The principle of equality of all ethnic languages should be abided by, the freedom to use and develop their own written and spoken languages should be guaranteed for all ethnic groups, and all ethnic groups shall be advocated and encouraged to learn from each other’s language. |
| --- | --- |
| **ADB** | **ADB indigenous peoples policy**

The main purpose of the ADB indigenous peoples policy is to ensure that ethnic minorities can participate in and benefit from development projects. The main points are:

(1) The socioeconomic profile and quality of life of ethnic minorities are usually lower than the mainstream population. While acknowledging the sovereignty of the borrower, ADB thinks there is responsibility to ensure that:

① the ethnic minorities share equal opportunities, and

② its assistance to developing member countries will not have any negative impact on the culture, lifestyle and interests of the ethnic minorities. ADB assisted projects will possibly have potential adverse impacts on the ethnic minorities where such projects are located, so ADB asks the borrower to develop an ethnic minority development plan (EMDP) to ensure that projects are implemented in accordance with the ADB’s indigenous peoples policy.

(2) The EMDP shall describe the socioeconomic features of the ethnic minorities affected by the project, identify the major impacts of the project on them, including positive and negative ones, and consider revising the project design to minimize the negative impacts, and/or taking measures to avoid or reduce such negative impacts and strengthen the benefits of the project to the ethnic minorities. The EMDP shall include implementation, monitoring and evaluation procedures. |
2. Overview of Ethnic Minorities in the Subproject Area

2.1 Population Overview

2.1.1 Profile of Minority Population in the Beneficiary Area

1) Water supply service area

According to the feasibility study report, the Subproject will supply water to southern Guiyang (no changes after incorporation of Mengguan WTP in this subproject), which had a population of 523,600 in 2010, including an urban population of 329,500 (including a 5% floating population), and a rural population of 194,100, with an urbanization rate of 62.9%.

Mengguan and Qingyan Towns, and University Cluster Zone in Huaxi District, and Ergezhai Town and Xiaomeng Industrial Park in Namming District are main areas of central water supply. In the water supply area, University Cluster Zone has a planned population of 135,000 in Phase 1 and 145,000 in Phase 2, totaling 280,000; Xiaomeng Industrial Park has a planned population of 85,000. To date, Mengguan, Qingyan and Ergezhai Towns have 24,478 households with 103,323 persons in total, including 49,937 women, accounting for 48.33%; and a minority population of 20,094, accounting for 19.45%. In minority population, there are 5,597 Miao people, accounting for 27.85% of minority population; and 8,317 Buyi people, accounting for 41.39%. See Table 2-1.

Table 2-1 Statistics of Beneficial Ethnic Minority Residents in the Water Supply Area

<table>
<thead>
<tr>
<th>District</th>
<th>Town</th>
<th>HHs</th>
<th>Population</th>
<th>Female population</th>
<th>Minority population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Population</td>
</tr>
<tr>
<td>Huaxi</td>
<td>Mengguan</td>
<td>5224</td>
<td>19331</td>
<td>9497</td>
<td>6379</td>
</tr>
<tr>
<td></td>
<td>Qingyan</td>
<td>7896</td>
<td>31924</td>
<td>15969</td>
<td>8500</td>
</tr>
<tr>
<td>Nanming</td>
<td>Ergezhai</td>
<td>11558</td>
<td>52068</td>
<td>24471</td>
<td>5215</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>24478</td>
<td>103323</td>
<td>49937</td>
<td>20094</td>
</tr>
</tbody>
</table>

Source: Statistical Yearbook 2013 of Huaxi District, Statistical Yearbook 2013 of Nanming District

In the area of water supply service, until 2020, the population of Xiaohe, Ergezhai and Huaxi District will be 1.265 million. The population of permanent residents is 1.085 million, among which, 500 thousand of people in Huaxi District, 400 thousand of people in Xiaohe District, 100 thousand of people in Ergezhai District and 85 thousand of people in Xiaomeng Industrial park. There are 0.18 million of the students and 0.246 million of people from ethnic minorities.

2) Irrigation service area

According to the feasibility study report, the irrigation area involves Maling Village, Maling Xiang only. Its mode of irrigation will be gravity irrigation from an elevated water tank at the level of 1,200m, and its range of irrigation will be 1,200m-1,080m around the water tank. The Subproject has a designed irrigated area of 3,060 mu, including 2,499 mu of irrigated land and 561 mu of non-irrigated land. Maling Village is located in the center of Maling Xiang, and has 1,214 households with 4,956 persons, including 345 minority households with 1,325 persons, mostly Buyi and Miao people, which account for 95% of minority population.

2.1.2 Profile of Minority Population in the Affected Area of Land Acquisition and House Demolition

The inundated area, junction construction area and associated waterworks construction area will be affected by LA and HD.

According to the feasibility study report, the inundated area and junction construction area all occupy land in Maling Xiang. Maling Xiang is located in southwestern Huaxi District, governs 8 administrative villages and 77 village groups, and has 1,938 households with 8,585 persons,
including a minority population of 4,421, accounting for 52.4%. Maling Xiang is one of the 7 minority townships of Huaxi District, inhabited by Buyi and Miao people, who maintain ethnic characteristics in production and lifestyle.

1) Inundated area

The inundated area affects 518 households with 2,030 persons in 15 village groups of two natural villages in Maling Village, including 933 women, accounting for 45.96%; and 429 minority residents, accounting for 21.13%. In minority population, there are 156 Miao people, accounting for 36.36%; and 273 Buyi people, accounting for 63.63%. See Table 2-2.

Table 2-2 Statistics of Affected Minority Residents in the Inundated Area

<table>
<thead>
<tr>
<th>District</th>
<th>Xiang</th>
<th>Admin. Village</th>
<th>Natural village</th>
<th>Group</th>
<th>HHs</th>
<th>Population</th>
<th>Female population</th>
<th>Minority population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Huaxi</td>
<td>Maling</td>
<td>Maling</td>
<td>Geyue</td>
<td>Dahuangdi</td>
<td>13</td>
<td>47</td>
<td>28</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Datiankan</td>
<td>27</td>
<td>83</td>
<td>38</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Doupengshan</td>
<td>35</td>
<td>140</td>
<td>80</td>
<td>140</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Duimenhe</td>
<td>28</td>
<td>90</td>
<td>40</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Gelou</td>
<td>108</td>
<td>421</td>
<td>201</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Geyue</td>
<td>11</td>
<td>39</td>
<td>15</td>
<td>/</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Haizhaitang</td>
<td>25</td>
<td>87</td>
<td>41</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Maojiao</td>
<td>31</td>
<td>118</td>
<td>53</td>
<td>/</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Paohechong</td>
<td>20</td>
<td>65</td>
<td>28</td>
<td>/</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Zhongyuanshan</td>
<td>13</td>
<td>47</td>
<td>20</td>
<td>13</td>
</tr>
<tr>
<td>Maling</td>
<td></td>
<td></td>
<td></td>
<td>Sanjiaopo</td>
<td>31</td>
<td>121</td>
<td>56</td>
<td>121</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Chongtou</td>
<td>31</td>
<td>137</td>
<td>63</td>
<td>62</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Shilang</td>
<td>45</td>
<td>220</td>
<td>90</td>
<td>/</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Weidui</td>
<td>30</td>
<td>137</td>
<td>68</td>
<td>/</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Raoshang</td>
<td>70</td>
<td>278</td>
<td>112</td>
<td>/</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>518</td>
<td>2030</td>
<td>933</td>
<td>429</td>
</tr>
</tbody>
</table>

Source: PMO

2) Junction construction area

The junction construction area affects 152 households with 555 persons in 6 village groups of Geyue Natural Village of Maling Village, including 254 females, accounting for 45.77%; and 61 minority residents, accounting for 10.99%. Minority populations includes 31 Miao people, accounting for 50.82%; and 30 Buyi people, accounting for 49.18%. See Table 2-3.

Table 2-3 Statistics of Affected Minority Residents in the Junction Area

<table>
<thead>
<tr>
<th>District</th>
<th>Xiang</th>
<th>Admin. Village</th>
<th>Natural village</th>
<th>Group</th>
<th>HHs</th>
<th>Population</th>
<th>Female population</th>
<th>Minority population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Huaxi</td>
<td>Maling</td>
<td>Maling</td>
<td>Geyue</td>
<td>Duimenhe</td>
<td>28</td>
<td>90</td>
<td>40</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Geyue</td>
<td>11</td>
<td>39</td>
<td>15</td>
<td>/</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Haizhaitang</td>
<td>25</td>
<td>87</td>
<td>41</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Maojiao</td>
<td>31</td>
<td>118</td>
<td>53</td>
<td>/</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Potoushang</td>
<td>26</td>
<td>103</td>
<td>49</td>
<td>/</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Hongyan</td>
<td>31</td>
<td>118</td>
<td>57</td>
<td>33</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>152</td>
<td>555</td>
<td>254</td>
<td>61</td>
</tr>
</tbody>
</table>

Source: PMO

3) Mengtuan WTP Component

The Component will occupy 58.68 mu of land in total, among which 41.93 mu of land for the Mengguan WTP, 13.75 mu of land for access road and 3 mu of land for the high-water-level pond. The land occupied by the Mengguan WTP and access road with an area of 55.68 mu is collectively owned by Mengguan Village, Mengguan Town. The high-water-level pond will occupy 3 mu of barren hill land in Heliu Group, Hongxing Village, Mengguan Town. The land is contracted by
8 households with 25 persons. No vulnerable groups are identified among affected persons. In addition, the Component will take charge of the construction of the water pipelines\textsuperscript{3} with 3.855 km, which will occupy 34.69 mu of unused land temporarily. These water pipelines will be laid along the existing roads. So no farmland will be occupied without any affected persons. See details in table 2-4.

<table>
<thead>
<tr>
<th>Subcomponent</th>
<th>Village</th>
<th>Constructive land</th>
<th>Barren hill land</th>
<th>Subtotal</th>
<th>Affected population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant area</td>
<td>Mengguan</td>
<td>41.93</td>
<td>0</td>
<td>41.93</td>
<td>0</td>
</tr>
<tr>
<td>Access road</td>
<td>Mengguan</td>
<td>13.75</td>
<td>0</td>
<td>13.75</td>
<td>0</td>
</tr>
<tr>
<td>Pump station</td>
<td>Heliu</td>
<td>0</td>
<td>3.00</td>
<td>3.00</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Group,</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>HongxingVillage</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>55.68</td>
<td>3.00</td>
<td>58.68</td>
<td>8</td>
</tr>
</tbody>
</table>

\textbf{2.2 Religious and Cultural Information}

\textbf{2.2.1 Miao People}

1) Economy

The Miao people cultivate paddy rice, corn, wheat, cotton, tobacco, rape, etc. mainly. In the subproject area, the Miao people’s main income sources are paddy rice and corn cultivation, and outside employment.

2) Diet

The Miao people eat corn, paddy rice and pork mainly, supplemented by wheat, potato, yam, beans, beef and mutton.

3) Clothing

The Miao people are known for masterly apparel making skills, including dyeing, embroidery and knitting, so that their clothes look flowery and shiny.

4) Festivals

The traditional Miao festivals are divided into the following types functionally: (1) farming festivals; (2) material exchange festivals; (3) social networking and love festivals; (4) worship festivals; and (5) memorial and ceremonial festivals. One Miao year has 12 months, and there is at least one festival per month.

5) Language

The Miao people have their own spoken language but no written language. The local Miao people communicate in Putonghua, and use the Guiyang dialect.

6) Religion

Traditionally, the Miao people often regard some giant or odd-shaped natural objects as embodiments of spiritualism, and thereby worship and offer sacrifices to them. Typical natural objects of worship including giant rocks (odd rocks), grottoes, big trees and mountain forests. No natural objects will be impacted in the project area.

\textbf{2.2.2 Buyi People}

1) Economy

---

\textsuperscript{3} Hongyan Reservoir Subproject will take charge of construction of other water pipelines with 22.5 of km.
In the subproject area, agriculture is very important for the Buyi people, and their crop structure is identical with that of the local Han people. They usually grow paddy rice and rape on irrigated land, and corn and wheat on non-irrigated land.

2) Diet

Their diet differs slightly from that of the Han people, in which rice and corn are staple foodstuffs, while wheat, sorghum, potato and beans are supplementary foodstuffs. Their dietary meat is from livestock and poultry mainly.

3) Clothing

The Buyi people mostly live on flat plains or in villages close to river valleys, and prefer clothes in blue, cyan, black and white. Young adult men usually wear a kerchief, a lapel jacket (or large-front gown) and trousers. Old people mostly wear a lapel jacket or gown. Women are dressed in different ways, some of them in a lapel jacket, trousers or a pleated skirt, silver bracelets, earrings and chaplets, some in embroidered clothes, and some in white-towel kerchief.

4) Festivals

The Buyi people boast splendid culture and arts. The traditional dances include the bronze-drum dance, weaving dance, lion dance and sugar-bag dance. Some festivals are similar to those of the Han people and some are unique to them only, such as March 3 (Earth Silkworm Society Festival), April 8 (Cattle King Day) and June 6 (worship of Pangu), etc.

5) Language

They have no written or spoken language of their own, and usually use Putonghua and speak the Guiyang dialect.

6) Religion

The Buyi people believe in multiple gods, and worship nature and ancestors. Few of them believe in Christianity. They have many fete-days every year to offer sacrifices to the gods of mountain and tree, etc. There are memorial tablets of ancestors in the main room of each house, and sacrifices are offered on every festival.

2.3 Socioeconomic Profile

1) Population

In 2013, project area had a population of 108,300, including a female population of 52,400, accounting for 48.38%; a minority population of 21,400, accounting for 19.76%. Huaxi District had a population of 367,200, including a female population of 178,000, accounting for 48.47%; a minority population of 133,200, accounting for 36.27%; and a poor population of 4,000, with a poverty incidence of 2%. Nanming District had a population of 560,200, including a female population of 282,000, accounting for 50.34%; a minority population of 36,400, accounting for 6.5%; and a poor population of 3,000, with a poverty incidence of 0.5%. See Table 2-5.

<table>
<thead>
<tr>
<th>Population</th>
<th>Project Area</th>
<th>Huaxi District</th>
<th>Nanming District</th>
<th>Guiyang City</th>
<th>Guizhou Province</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total (10,000)</td>
<td>10.83</td>
<td>36.72</td>
<td>56.02</td>
<td>452.19</td>
<td>3484</td>
</tr>
<tr>
<td>Where: females (10,000)</td>
<td>5.24</td>
<td>17.80</td>
<td>28.20</td>
<td>219.51</td>
<td>1818.61</td>
</tr>
<tr>
<td>Percent (%)</td>
<td>48.38</td>
<td>48.47</td>
<td>50.34</td>
<td>48.54</td>
<td>52.20</td>
</tr>
<tr>
<td>Nonagricultural population (10,000)</td>
<td>0.98</td>
<td>11.49</td>
<td>27.4</td>
<td>185.4</td>
<td>1268.52</td>
</tr>
<tr>
<td>Minority population (10,000)</td>
<td>2.14</td>
<td>13.32</td>
<td>3.64</td>
<td>162.2</td>
<td>1240.44</td>
</tr>
<tr>
<td>Percent (%)</td>
<td>19.76</td>
<td>36.27</td>
<td>6.50</td>
<td>35.86</td>
<td>35.60</td>
</tr>
<tr>
<td>Poor population (10,000)</td>
<td>/</td>
<td>0.4</td>
<td>0.3</td>
<td>32.03</td>
<td>923</td>
</tr>
<tr>
<td>Poverty incidence (%)</td>
<td>/</td>
<td>2.0</td>
<td>0.5</td>
<td>7.1</td>
<td>26.80</td>
</tr>
</tbody>
</table>
2) Cultivated land

In 2013, project area had 3,066 mu of cultivated land, including 2,499 mu of irrigated land, accounting for 81.51%. Huaxi District had 10,801 mu of cultivated land, including 6,075 mu of irrigated land, accounting for 56.24%; Nanming District had 1,461 mu of cultivated land, including 632 mu of irrigated land, accounting for 43.26%. See Table 2-6.

<table>
<thead>
<tr>
<th>Land area</th>
<th>Project Area</th>
<th>Huaxi District</th>
<th>Nanming District</th>
<th>Guiyang City</th>
<th>Guizhou Province</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land area (km²)</td>
<td>/</td>
<td>901.19</td>
<td>209.34</td>
<td>8034</td>
<td>176167</td>
</tr>
<tr>
<td>Cultivated area (mu)</td>
<td>3066</td>
<td>10801</td>
<td>1461</td>
<td>4079115</td>
<td>68288435</td>
</tr>
<tr>
<td>Where: irrigated land (mu)</td>
<td>2499</td>
<td>6075</td>
<td>632</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>Percent (%)</td>
<td>81.51</td>
<td>56.24</td>
<td>43.26</td>
<td>/</td>
<td>/</td>
</tr>
</tbody>
</table>


3) Industry structure

In 2013, Huaxi District’s GDP was 11.953 billion yuan, and the proportions of primary, secondary and tertiary industries were 7.69%, 39.32% and 52.99%, in which the proportion of primary industries was lower than the provincial average but higher than the municipal average; Nanming District GDP’s GDP was 44.007 billion yuan, and the proportions of primary, secondary and tertiary industries were 0.52%, 24.88% and 74.6%, in which the proportions of primary and secondary industries were lower than the provincial and municipal averages, and that of tertiary industries was higher than the provincial and municipal averages. See Table 2-7.

<table>
<thead>
<tr>
<th>Industry mix</th>
<th>Huaxi District</th>
<th>Nanming District</th>
<th>Guiyang City</th>
<th>Guizhou Province</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP (00 million yuan)</td>
<td>119.53</td>
<td>440.07</td>
<td>2085.42</td>
<td>6852.20</td>
</tr>
<tr>
<td>Primary industries (%)</td>
<td>7.69</td>
<td>0.52</td>
<td>3.90</td>
<td>13.00</td>
</tr>
<tr>
<td>Secondary industries (%)</td>
<td>39.32</td>
<td>24.88</td>
<td>40.70</td>
<td>39.10</td>
</tr>
<tr>
<td>Tertiary industries (%)</td>
<td>52.99</td>
<td>74.60</td>
<td>55.40</td>
<td>47.90</td>
</tr>
</tbody>
</table>


4) Income

In 2013, project area’s per capita net income of rural residents was 6,325 yuan. Huaxi District’s per capita net income of rural residents was 8,665 yuan, and per capita disposable income of urban residents 21,785 yuan, both higher than the provincial averages and lower than the municipal averages; Nanming District’s per capita net income of rural residents was 11,415 yuan, and per capita disposable income of urban residents 23,904 yuan, both higher than the provincial and municipal averages. See Table 2-8.

<table>
<thead>
<tr>
<th>Income</th>
<th>Project Area</th>
<th>Huaxi District</th>
<th>Nanming District</th>
<th>Guiyang City</th>
<th>Guizhou Province</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per capita GDP</td>
<td>/</td>
<td>32702</td>
<td>51362</td>
<td>46118</td>
<td>19710</td>
</tr>
</tbody>
</table>

### 2.4 Ongoing Ethnic Minority Development Projects in the Subproject Area

The realization and maximization of the Subproject’s social benefits will rely on some ongoing development projects in the subproject area, including: 1) Whole-village Advancement Project, and Rain and Dew Program by the poverty reduction office; 2) beautiful countryside building by the agriculture bureau; 3) business startup and employment training for women, small-amount secured loans for women, etc. by the women’s federation; and 4) characteristic minority village construction, ethnic minority development, etc. by the ethnic and religious affairs bureau.

<table>
<thead>
<tr>
<th>Project</th>
<th>Implemented by</th>
<th>Funding source</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole-village Advancement Project</td>
<td>Poverty reduction office</td>
<td>Special poverty reduction funds</td>
<td>Poverty reduction through industrialization, reemployment training, new countryside building</td>
</tr>
<tr>
<td>Rain and Dew Program</td>
<td></td>
<td>State finance</td>
<td>Industrial backbone and development leaders</td>
</tr>
<tr>
<td>Characteristic minority village construction</td>
<td>Ethnic and religious affairs bureau</td>
<td>State, provincial and municipal poverty reduction funds</td>
<td>Construction of ecological waste tanks, culture squares, sewer lines, and other supporting facilities</td>
</tr>
<tr>
<td>Beautiful countryside building</td>
<td>Agriculture bureau</td>
<td>Provincial finance</td>
<td>Construction of well-being roads, water, housing, electricity, communication and villages</td>
</tr>
<tr>
<td>Special poverty support funds for rural specialized cooperatives</td>
<td>Agriculture bureau</td>
<td>Provincial finance</td>
<td>4 million yuan per annum</td>
</tr>
<tr>
<td>Tax exemption policy for rural specialized cooperatives</td>
<td>Finance bureau</td>
<td>State finance</td>
<td>Exempting farm products produced by members and sold by rural specialized cooperatives from value-added tax</td>
</tr>
<tr>
<td>Business startup and employment training for women</td>
<td>Women’s federation, poverty reduction office</td>
<td>State poverty reduction funds, provincial finance</td>
<td>Business startup and minority handicrafts for women, etc.</td>
</tr>
<tr>
<td>Small-amount secured loans for women</td>
<td>Women’s federation</td>
<td>Provincial finance</td>
<td>Granting small-amount discounted loans to eligible poor rural women, giving priority to capable rural women and leaders of women’s economic cooperatives, etc.</td>
</tr>
</tbody>
</table>

3. Impacts of the Subproject on Ethnic Minorities

The EMDP preparation team learned the Subproject’s positive and negative impacts on ethnic minorities by means of questionnaire survey, interview, FGD, key informant interview and stakeholder discussion meeting.

3.1 Positive Impacts on local people, including EMs

1) Meeting urban water supply demand, improving the investment environment, and promoting local economic development

Guiyang City is short of water resources and has a prominent problem of engineering (seasonal) water shortage, and its water resources infrastructure is backward.

University Cluster Zone, Xiaomeng Industrial Park, Ergezhai Logistics Center, etc. will be constructed in southern Guiyang. With the increase of resident population, there will be a greater demand for water resources, which cannot be met by the existing water supply system. The Subproject will provide a sustainable, high-quality water source to southern Guiyang, help improve the living environment of local residents, and make it possible for logistics, tourism and industry to develop.

It is learned that in Mengguan Town, Qingyan Town, Ergezhai, the university zone, and Xiaomeng Industrial Park, there are numerous college students and migrant workers, and many restaurants and stores, and water consumption is tremendous. Water supply stoppage occurs frequently in urban living areas, especially in summer, causing adverse impacts on residents’ daily life. The survey shows that 62.7% of the respondents strongly expect and 21.6% expect to improve the current situation of water supply. Constructing a waterworks is expected by local residents. When the urban water supply problem is solved, the local living environment and conditions will be improved greatly.

Ms Liu in Lishuxiang Village in Ergezhai Logistics Center, Namming District

In our village, a household has a 3-4 storied building on average for rent to migrant workers. My house is rented to 16 non-local households with over 60 persons. In our village, only over 60 households have registered permanent residence. In recent years, with the influx of more floating population, water supply has become tight, especially in summer peak hours.

The tourism of Huaxi District is developing rapidly through strengthening industry management and publicity, and improving service quality, thereby driving the development of other service industries, such as transport, wholesale, retail, accommodation, catering and finance. In 2013, the district’s gross tourism revenue was 11.473 billion yuan, a year-on-year growth of 32.5%; the district received 15 million men-times of visitors, a year-on-year growth of 31%. The Subproject will improve the environment of the subproject area and drive its further economic development.

2) Meeting the irrigation demand of surrounding areas, ensuring irrigation stability and continuity, and promoting agricultural restructuring

The irrigation area of the Hongyan Reservoir is located in Maling Xiang, where the main crops are paddy rice and rape. However, due to the lack of irrigation facilities, irrigation water is not dependable, making it impossible to expand the cultivation of commercial crops.

The irrigation area of the Subproject involves Maling Village, Maling Xiang only. Its mode of irrigation will be gravity irrigation from an elevated water tank at the level of 1,200m, and its range of irrigation will be 1,200m-1,080m around the water tank. The Subproject has a designed irrigated area of 3,060 mu, including 2,499 mu of irrigated land and 561 mu of non-irrigated land.
After the completion of the Subproject, non-irrigated land on which only corn can be cultivated will be used to cultivate commercial crops, such as watermelon and vegetables, thereby increasing local minority residents’ income.

### Mr. Zhu villager of Geyue Natural Village, Maling Xiang, Huaxi District

Income from commercial crop cultivation is much higher than that from crop cultivation. The income per mu of corn is less than 1,000 yuan. If irrigation water were available, I could have grown commercial crops like bean and watermelon, so that the income per mu would be over

### 3) Offering job opportunities to increase income

At the construction and operation stages, infrastructure construction and industry chain extension will promote the development of relevant industries, thereby generating more job opportunities in the subproject area. Through consultation, such job opportunities will be first made available to vulnerable groups, including ethnic minorities, women and the poor, to increase their income. To some extent, the income structure of minority workers involved in the construction of the Subproject will vary, and the proportion of nonagricultural income will rise.

According to the questionnaire survey, 75% of the respondents in Maling Village are willing to get employed under the Subproject to increase income. The Subproject has a long construction period and will generate some unskilled job opportunities, with a peak workforce of over 1,000; local residents are competent for such unskilled jobs, e.g., women cook for workers on the construction site. During construction, local vehicles will be used to transport building materials. After the completion of the Subproject, local people will be employed to manage the irrigation area. In addition, the Subproject will improve the local investment and employment environment, and generate more job opportunities for local residents.

### Mr. Chen (Buyi, 48), villager of Geyue Natural Village, Maling Xiang, Huaxi District

I work in Guiyang City, and my living costs are high. I’m willing to serve as a worker in reservoir construction, because I will live at home and save living costs greatly. My little brother has a small truck, so I can let him transport construction materials. It is best to work near home.

### 4) Improving population quality through education and training

The socioeconomic survey shows that local laborers are generally poorly educated, so their development is restricted. Rural young adults and better educated laborers have mostly turned to nonagricultural industries, so that laborers dealing with crop cultivation are mostly poorly educated people, women or old people.

After the completion of the Subproject, with the improvement of irrigation conditions and the adjustment of industry mix, better educated laborers will be attracted to return. In addition, relevant training and education will be offered gradually to improve population quality. Training on agricultural and nonagricultural skills will be offered extensively in the subproject area, such as commercial crop cultivation, black-furred pig, meadow chicken and cold-water fish breeding, and embroidery. The APs can broaden their development eyeshot and thinking through relevant training and education activities, and improve their overall competencies on this basis.

### 5) Promoting the development of ecological tourism for expanded benefits

The Hongyan Reservoir will become a new scenic spot, and nearby traffic conditions will be further improved. Based on local conditions, such tourist activities as agritainment, crop picking and folklore performances can be carried out, so that minority residents can deal with tourism to increase income. They may deal with accommodation, catering and entertainment services, and
sell farm products and embroidery artworks, thereby increasing income and the proportion of income from tertiary industries, and expand the Subproject’s benefits.

It is learned from the agriculture bureau that Maling Village has been included in the beautiful countryside building program of Maling Xiang, where rural ecological tourism will be developed to promote the sustainable development of the subproject area. The Subproject will help to improve the local public infrastructure and increase the capacity of tourist attractions. The survey shows that local tourism is positioned as folklore and ecological tourism in the form of agritainment. This type of tourism will take advantage of local ethnic customs, and will not impact local culture as long as it is well preserved by local governments. On the other hand, tourism will generate considerable income.

3.2 Negative Impacts and Risks to Local People, including EMs

1) Risks of LA, HD and resettlement. Livelihood model is changed

The Subproject will involve LA and HD. 624.83 mu of cultivated land and 980.62 mu of woodland, and houses of 37,972.56m² will be inundated for the Subproject, affecting 984 persons; 497.30 mu of land will be acquired in the junction construction area. And the Mengguan WTP component will occupy 58.68 mu of land in total, among which 41.93 mu of land for the Mengguan WTP, 13.75 mu of land for access road and 3 mu of land for the high-water-level pond. The land occupied by the Mengguan WTP and access road with an area of 55.68 mu is collectively owned by Mengguan Village, Mengguan Town. The high-water-level pond will occupy 3 mu of barren hill land in Heliu Group, Hongxing Village, Mengguan Town. The land is contracted by 8 households with 25 persons. No vulnerable groups are identified among affected persons. In addition, the Component will take charge of the construction of the water pipelines with 3.855 km, which will occupy 34.69 mu of unused land temporarily. These water pipelines will be laid along the existing roads, so no farmland will be occupied without any affected persons.

Production and livelihood activities of local residents will be affected by LA and HD; in addition, excessively low compensation rates, or the untimely or non-transparent payment of compensation fees may results in conflicts, thereby preventing the Subproject from being implemented successfully.

Since the Subproject involves LA, the APs will lose the opportunity to obtain food and natural resources, and earn extra income from the acquired land. It is learned that cultivated land in the inundation area is fertile and flat, and the proportion of agricultural resettlement is low because the subproject area is short of arable land resources. In the short term, their income structure and livelihoods will vary to some extent, and their reliance on agricultural activities and proportion of agricultural income will drop. If they cannot receive proper production resettlement, they will be faced with the risk of economic vulnerability.

2) Construction safety risks

Construction safety risks, including safety risks for construction workers and nearby residents: 1) Inadequate safety protection measures during construction may result in personal injuries or deaths;
2) Construction vehicles will pose safety risks to local residents, especially old people, children and pregnant women.

Although such risks are temporary, effective measures should still be taken during construction to avoid or mitigate such risks.

3) Health risks

There is no serious infectious disease in the subproject area. Great attention is paid to health supervision and disease control at the construction site. A dedicated reporting and investigation mechanism is in place.

However, since the construction staff is highly floating during construction, their living facilities may become a source of infectious diseases, such as AIDS, diarrhea and hepatitis A. At the construction stage, agencies concerned should strengthen health publicity and take appropriate measures.

4) Risks of supply of domestic and irrigation water for downstream residents

On terraces below the dam, domestic water is taken from small branch streams and spring openings other than from the mainstream of the Maling River, and the demand for domestic and irrigation water can be met. The construction and operation of the reservoir may affect downstream discharge, thereby affecting the domestic and irrigation water supply of downstream residents adversely.

At the construction stage, diversion tunnels should be constructed to maintain river discharge; at the water storage and operation stage, an adequate and stable river discharge should be maintained to meet the demand of downstream residents for domestic and irrigation water.

5) Risk of unacceptable water quality of the water source

If inadequate attention is paid to environmental protection, the water source is likely to be eutrophicated and polluted at the construction and operation stages. For this purpose, the reservoir bottom should be cleaned up thoroughly before water storage, and domestic wastewater and solid waste generated by construction and living activities should be collected and disposed of properly.

6) Environmental and public security risks from floating population

During construction, non-local construction workers may pose environmental and public security risks to the subproject area. Their dietary and living habits may differ from those of the local ethnic minorities, and may make local minority residents feel uncomfortable. The owner and construction agency should strengthen publicity in this respect, respect local residents' customs, and maintain harmonious relations with them.

7) The cultural identity of ethnic minorities and community cohesion will be affected to some extent

Since the APs have been mostly resettled nearby and are still under the jurisdiction of their former village groups, they are able to maintain their geographic and kinship relations. Therefore, the resettlement activities of the Subproject will not affect local social and cultural forms adversely.

There is a substantial inflow of floating population during construction, and numerous tourists will come with the development of tourism, which will affect minority culture to some extent and threaten the cultural identity of ethnic minorities potentially.
During resettlement, if the local governments and village committees cannot treat minority residents, whether they are affected by the Subproject or not, equally, not only their immediate interests will be infringed on, but also community cohesion will be affected.
4. Gender and Social Development

4.1 Socioeconomic Background of Local Women

1) Educational level

The socioeconomic survey shows that the proportion of junior high school education is the highest among local women, being 40.9%, and that of college or above education is the lowest, being 2.3%; between them are primary school education (23.5%), senior high school education (18.9%) and illiteracy (14.4%). Generally, local women's educational levels are lower than those of local men.

Table 4-1  Statistics of Educational Levels by Gender

<table>
<thead>
<tr>
<th>Educational level</th>
<th>Females (%)</th>
<th>Males (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>College or above</td>
<td>2.3</td>
<td>2.9</td>
</tr>
<tr>
<td>Senior high school / secondary technical school</td>
<td>18.9</td>
<td>22.2</td>
</tr>
<tr>
<td>Junior high school</td>
<td>40.9</td>
<td>41.6</td>
</tr>
<tr>
<td>Primary school</td>
<td>23.5</td>
<td>21.6</td>
</tr>
<tr>
<td>Illiterate</td>
<td>14.4</td>
<td>11.7</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: socioeconomic survey

Among different ethnic groups, the proportion of primary school education is the highest among Miao women, being 40.5%; that of junior high school education is the highest among Buyi women, being 40.0%; and that of junior high school education is the highest among Han women, being 42.4%. Compared to Han women, minority women have generally lower educational levels.

Table 4-2  Statistics of Educational Levels by Ethnic Group and Gender (%)

<table>
<thead>
<tr>
<th>Educational level</th>
<th>Miao</th>
<th>Buyi</th>
<th>Han</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Females</td>
<td>Males</td>
<td>Females</td>
</tr>
<tr>
<td>College or above</td>
<td>0.0</td>
<td>0.0</td>
<td>2.6</td>
</tr>
<tr>
<td>Senior high school / secondary technical school</td>
<td>0.0</td>
<td>36.8</td>
<td>0.0</td>
</tr>
<tr>
<td>Junior high school</td>
<td>27.0</td>
<td>42.1</td>
<td>40.0</td>
</tr>
<tr>
<td>Primary school</td>
<td>40.5</td>
<td>21.1</td>
<td>30.0</td>
</tr>
<tr>
<td>Illiterate</td>
<td>32.5</td>
<td>0.0</td>
<td>30.0</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: socioeconomic survey

2) Occupations

45.6% of the female respondents do farm work mainly, followed by outside employment (17.9%), and self-employer (13%).

Table 4-3  Statistics of Occupations by Gender (%)

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Females</th>
<th>Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farmer</td>
<td>45.6</td>
<td>34.7</td>
</tr>
<tr>
<td>Migrant worker</td>
<td>17.9</td>
<td>16.5</td>
</tr>
<tr>
<td>Enterprise employee</td>
<td>3.8</td>
<td>8.2</td>
</tr>
<tr>
<td>Civil servant</td>
<td>0.8</td>
<td>0.0</td>
</tr>
<tr>
<td>Self-employer</td>
<td>13.0</td>
<td>19.4</td>
</tr>
<tr>
<td>Public worker</td>
<td>1.5</td>
<td>0.0</td>
</tr>
</tbody>
</table>
### Table 4-4 Statistics of Occupations by Ethnic Group and Gender (%)

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Miao Females</th>
<th>Miao Males</th>
<th>Buyi Females</th>
<th>Buyi Males</th>
<th>Han Females</th>
<th>Han Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farmer</td>
<td>75.0</td>
<td>26.3</td>
<td>60.0</td>
<td>45.0</td>
<td>40.7</td>
<td>34.4</td>
</tr>
<tr>
<td>Migrant worker</td>
<td>0.0</td>
<td>21.1</td>
<td>20.0</td>
<td>30.0</td>
<td>13.2</td>
<td>13.7</td>
</tr>
<tr>
<td>Enterprise employee</td>
<td>12.5</td>
<td>15.8</td>
<td>0.0</td>
<td>3.3</td>
<td>3.5</td>
<td>7.6</td>
</tr>
<tr>
<td>Civil servant</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.9</td>
<td>0.0</td>
</tr>
<tr>
<td>Self-employer</td>
<td>12.5</td>
<td>5.3</td>
<td>10.0</td>
<td>6.7</td>
<td>20.7</td>
<td>23.7</td>
</tr>
<tr>
<td>Public worker</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>1.8</td>
<td>0.0</td>
</tr>
<tr>
<td>Unemployed</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>3.5</td>
<td>6.1</td>
</tr>
<tr>
<td>Student</td>
<td>0.0</td>
<td>0.0</td>
<td>10.0</td>
<td>3.3</td>
<td>1.8</td>
<td>0.0</td>
</tr>
<tr>
<td>Retired</td>
<td>12.5</td>
<td>21.1</td>
<td>0.0</td>
<td>0.0</td>
<td>7.0</td>
<td>6.9</td>
</tr>
<tr>
<td>Other</td>
<td>0.0</td>
<td>7.4</td>
<td>0.0</td>
<td>0.0</td>
<td>7.0</td>
<td>7.6</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: socioeconomic survey

75.0%, 60.0% and 40.7% of the Miao, Buyi and Han female respondents do farm work mainly, while these proportions are 26.3%, 45.0% and 34.4% among the male respondents, showing that minority women rely more on farming than Han people.

### Table 4-5 Statistics of Putonghua Proficiency by Ethnic Group and Gender (%)

<table>
<thead>
<tr>
<th>Putonghua</th>
<th>Miao Females</th>
<th>Miao Males</th>
<th>Buyi Females</th>
<th>Buyi Males</th>
<th>Han Females</th>
<th>Han Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>Can speak</td>
<td>12.5</td>
<td>47.4</td>
<td>40.0</td>
<td>45.0</td>
<td>46.8</td>
<td>47.9</td>
</tr>
<tr>
<td>Cannot speak</td>
<td>87.5</td>
<td>52.6</td>
<td>60.0</td>
<td>55.0</td>
<td>53.2</td>
<td>52.1</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: socioeconomic survey

3) **Putonghua proficiency**

12.5%, 40.0% and 36.8% of the Miao, Buyi and Han female respondents can speak Putonghua. The proportion of Miao women speaking Putonghua (12.5%) is much lower than that of Miao men (47.4%), the proportion of Buyi women speaking Putonghua (40%) is slightly lower than that of Buyi men (45%), while the proportion of Han women speaking Putonghua is almost the same as that of Han men. 56.8% of the female respondents expect Putonghua training in order to receive more development opportunities.

### 4.2 Development Activities of Local Women

The Guizhou Provincial Government has developed the Women’s Development Plan (2011-2020). In addition, the local women’s federations have implemented a series of women’s development initiatives to provide women with all-round assistance, including:

1) **Small-amount loans for women**
Eligible urban and rural women may apply for small-amount secured loans for business startup, with an upper limit of 80,000 yuan and a term of two years. In 2013, the Huaxi District Women’s Federation granted small-amount loans totaling 4.41 million yuan to 79 women.

2) Learning and Contest
The Learning and Contest program includes practical skills training for women offered by the municipal agriculture, science and technology, and labor and social security bureaus, and is designed to support rural women to produce handicrafts, including embroidery, wax dyeing, bag making, etc. The Guiyang Municipal Women’s Federation has organized two handicrafts training courses in Qingyan Town to 100 women.

3) Women’s capacity building
This program aims to improve competencies of urban residents through extensive education and training, so that they can excel at work, and help laid-off women start up businesses or get reemployed.

4) Legal knowledge training
Legal knowledge training is conducted by local women’s federations through brochure distribution and on-site expert training in order to improve women’s legal knowledge and awareness, protect their lawful rights, and provide legal assistance to them.

5) Cancer assistance for poor rural mothers
Free cervical carcinoma or breast cancer screening is offered to local poor women, and each eligible woman can receive a subsidy of 10,000 yuan, thereby relieving their financial burden greatly.

4.3 Impacts of the Project on Women
4.3.1 Positive Impacts
1) Improving women’s overall competencies through training and education
Local women are poorly educated in general. As a result, they have weak ability to accept new things, and their development is limited to some extent. With the implementation of the Subproject, more employment skills training will be offered to women, especially cooking and minority handicrafts, thereby improving their overall competencies.

2) Encouraging women to participate in the Subproject to promote their development
In ADB-financed projects, women’s participation is always valued and encouraged. Their participation at the preparation, implementation and operation stages can improve their status, strive for more development opportunities, and realize their own value.

3) Generating more job opportunities for women to increase their income
At the construction and operation stages, some unskilled jobs will be available to local laborers, especially vulnerable groups, including ethnic minorities, women and the poor, to increase their income. The survey shows that 78.5% of the female respondents are willing to do suitable jobs offered by the Subproject. Such jobs will make women’s labor value evident, thereby improving their family status.

After the completion of the Subproject, with the improvement of the environment of the subproject area, tourism development will generate more nonagricultural job opportunities for local women; with the increase of irrigated area, more farmland will be available to grow commercial crops, thereby increasing local women’s income.

4) Reducing local women’s labor burden
In the subproject area, over 70% of male laborers work outside, leaving farm work to women, so that women’s labor intensity is high. After the completion of the Subproject, women’s labor intensity will be reduced due to gravity irrigation, and some labor resources will be saved.

4.3.2 Potential Risks

Although the Subproject will benefit women, they may also be exposed to the following risks if there is no gender sensitivity during design, implementation and management:

1) Women’s needs are neglected

Due to traditional minority cultures, usually little attention is paid to the education of women. As a result, women have a low level of perceptibility, and limited ability to participate in major household affairs and public affairs. This concept often leads to disregard of women’s needs and suggests at the design, implementation, and operation and management stages of the Subproject. For example, women’s needs are neglected in the project design, though women play an important role in irrigation in the subproject area; some women cannot sign for LA compensation fees because they are not regarded as heads of households; their suggestions cannot be regarded and adopted, etc.

In order to protect the rights and interest of local women, the IA and local governments should take the following measures to ensure women’s participation: 1) Local women will be encouraged to offer catering and other services to increase income; 2) During construction, unskilled jobs will be first made available to vulnerable groups including women and the poor on a voluntary basis; 3) Labor remuneration not less than the local minimum wage standard will be offered; 4) Women will have the same right to receive compensation as men; and 5) It should be ensured that subproject information is well communicated to women.

2) Women are excluded from training

Local women have a strong wish to receive training, but the proportion of women actually trained is lower than that of men. Some local women are unable to receive training because they work outside or think that only men should receive training. In training activities, not less than 30% of trainees should be women, and women’s needs should be taken into account, so that training is offered at times, and in forms and languages acceptable to women.
5. Public Participation and Grievance Redress

At the preparation stage, the feasibility study agency, EIA agency, RP and EMDP preparation team disclosed subproject information, and conducted free, prior and informed consultation in minority communities. This EMDP was prepared on the basis of such public participation activities as questionnaire survey, FGD, key informant interview and stakeholder discussion meeting.

5.1 Early-stage Participation Process

1. Disclosure of subproject information

1) Field investigation

①From March 2012 to February 2013, the Guiyang PMO and the IA communicated with potentially affected local residents on the scope of construction of the Subproject, and collected their attitudes to and opinions on the Subproject.

②On December 18, 2012, the Subproject broke ground formally.

2) Environmental impact assessment and disclosure

①In March 2013, the EIA agency conducted a survey on the EIA in Maling Xiang, Huaxi District and distributed 100 copies of the questionnaire, including 36 copies for minority residents and 10 copies for organizations.

②First round of disclosure: Hydrochina Guiyang Engineering Corp. During July 10-25, 2013, the public might send written opinions to the construction or EIA agency by letter, e-mail, fax, etc.

③Second round of disclosure: During August 10-20, 2013, the public might express opinions on and attitudes to the EIA of the Subproject by fax, letter, visit or e-mail.

④The Guiyang Municipal Environmental Protection Bureau approved the Environmental Impact Assessment Report of the Subproject prepared by Zhushui on January 14, 2014 and disclosed it for 10 days.

3) DMS and disclosure of results

①In March 2013, the General Office of the Guizhou Provincial Government issued the Notice on Prohibiting New Construction and Population Influx in the Area of the Hongyan Reservoir Subproject (GPGO [2013] No.27), which was posted in public spaces and broadcasted to protect villagers’ right of information.

②During April-May 2013, Hydrochina Guiyang Engineering Corp conducted a DMS. During the DMS, the local governments and the design agency communicated the resettlement policies to the APs actively, and answered their questions on site. In May 2017, the PMC consultants conducted the FGDs with stakeholders on the impacts of Mengguan WTP component.

③First round of disclosure: On July 20, 2013, the Maling Xiang Government organized the first round of disclosure in public places. On August 6, the Maling Xiang Government addressed verification applications household by household, and corrected mistakes in registration after verification. Verification results were signed by heads of households after acceptance.

④Second round of disclosure: From September 9, 2013, the Maling Xiang Government organized the second round of disclosure for 7 days to consult on existing issues and disputes.

⑤Third round of disclosure: On November 6, 2013, the Maling Xiang Government organized the third round of disclosure.

And the RP of Mengguan WTP component will be disclosed to affected households in project area in November 2017.

4) FGDs for public consultation
From March 2012 to June 2014, the IA, Huaxi District Resettlement Bureau and Maling Xiang Government held FGDs for public consultation on the Subproject and resettlement in Gelou, Duimenhe, Datiankan and Geyue Groups affected more seriously by the Subproject, with over 60 attendees per FGD. The FGDs aimed to learn the APs’ expectations, discuss resettlement measures, answer questions, and communicate the resettlement policies.

5) In June 2014, a meeting was held in Geyue Natural Village of Maling Village in the inundated area to discuss compensation and resettlement issues, involving representatives from affected minority households.

2. Participation in EMDP preparation
   1) Socioeconomic survey: During August 7-14, 2014, the socioeconomic survey was conducted in Maling Village, Maling Xiang in the inundated area and junction construction area, Dongjie Community, Qingyan Town in the water supply area and the construction area of the associated waterworks, as well as Xiaomeng Industrial Park in Qingxi Sub-district, Ergezhai Logistics Center in Nanming District. 320 copies of questionnaire were distributed in total, in which 303 valid copies were recovered, accounting for 94.69%; and 67 copies were distributed to minority residents, accounting for 22.11%. The questionnaire survey covered basic information of local residents (including minority residents and women), LA and HD impacts, expectations for the Subproject, etc.

   2) FGD: During August 8-9, 2014, the EMDP preparation team held two FGDs in Maling Village and Geyue Natural Village, involving minority residents and women, covering public participation, irrigation water use, gender-based division of labor, etc.

   3) Key informant interview: During August 5-6, 2014, the EMDP preparation team interviewed heads of the Huaxi District Water Resources Bureau, Agriculture Bureau, Women’s Federation, Ethnic and Religious Affairs Bureau, and Poverty Reduction Office to learn local ethnic minority development, women’s development, and policies and ongoing projects for ethnic minorities.

   During August 8-9, 2014, the secretary of Maling Village, Maling Xiang, and the head of Geyue Natural Village were interviewed to learn minority composition, education, crop cultivation, stockbreeding, outside employment, inundation impacts, expected resettlement mode, etc.

   4) Stakeholder discussion meeting: At the preparation stage, the EMDP preparation team held a city-level stakeholder discussion meeting to discuss potential impacts, risk reduction measures and suggested actions.
<table>
<thead>
<tr>
<th>Method</th>
<th>Time</th>
<th>Venue</th>
<th>Participants</th>
<th>Contents</th>
<th>Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questionnaire</td>
<td>Aug. 7-14</td>
<td>Maling Village, Maling Xiang, Dongjie Community, Qingyan Town, and Xiaomeng Industrial Park in Huaxi District; Ergezhai Logistics Center, Nanming District</td>
<td>303 copies, including 67 copies from minority residents</td>
<td>Learning basic information of local residents (including minority residents and women), LA and HD impacts, expectations for the Subproject, etc.</td>
<td>Local residents' expectations for the Subproject should be reflected to the local governments and the IA.</td>
</tr>
<tr>
<td>FGDs</td>
<td>Aug. 8-9</td>
<td>Maling Village and Geyue Natural Village, Maling Xiang, Huaxi District</td>
<td>26 villagers (incl. 9 minority residents and 11 women)</td>
<td>Learning public participation, irrigation water use, gender-based division of labor, etc.</td>
<td>1) There is a strong demand for irrigation water, and it is very necessary to construct the reservoir; 2) Women’s needs are sometimes neglected and should be taken into account during subproject implementation.</td>
</tr>
<tr>
<td>Key informant</td>
<td>Aug. 5-6</td>
<td>Huaxi District water resources bureau, agriculture bureau, women’s federation, ethnic and religious affairs bureau, etc.</td>
<td>Heads, consultants, PMO staff</td>
<td>Learning local ethnic minority development, women’s development, and policies and ongoing projects for ethnic minorities</td>
<td>1) All subproject agencies are clear about the current situation of minority residents in the subproject area and have initiated activities to promote their development; 2) All subproject agencies have promised to further carry out relevant activities to promote the development of minority residents and women.</td>
</tr>
<tr>
<td>interview</td>
<td>Aug. 8-9</td>
<td>Maling Village, Maling Xiang, Huaxi District, Geyue Natural Village</td>
<td>A village secretary a village group head</td>
<td>Learning minority composition, education, crop cultivation, stockbreeding, outside employment, inundation impacts, expected resettlement mode, etc.</td>
<td>1) Local minority residents are relatively backward in social and economic development, which needs promotion by activities under the Subproject; 2) The Subproject is expected to offer resources to promote local social and economic development.</td>
</tr>
<tr>
<td>Municipal level</td>
<td>Aug. 4</td>
<td>Guiyang Water Resources &amp; Transport Development &amp; Investment Group</td>
<td>Guiyang PMO, Development &amp; Investment Group expert panel</td>
<td>Discussing potential impacts, risk reduction measures and suggested actions</td>
<td>1) The local governments, subproject agencies and functional departments concerned should take the initiative in conducting relevant actions; 2) All subproject agencies should coordinate to minimize social risks and expand the Subproject’s benefits</td>
</tr>
<tr>
<td>discussion meeting</td>
<td>May 16, 2017</td>
<td>Guiyang Water Affairs (Group) Co., Ltd.</td>
<td>Guiyang Water Affairs (Group)</td>
<td>Discussing potential impacts, risk reduction</td>
<td>1) The project has positive effects on the ethnic</td>
</tr>
</tbody>
</table>
5.2 Subsequent Participation Process

To avoid potential risks of the Subproject, it is necessary to take various measures at the construction and operation stages:

1) At the construction stage, not less than 30% unskilled jobs should be first made available to local vulnerable groups, including ethnic minorities, women and the poor, noise pollution should be minimized, and the construction staff should respect local minority customs.

2) For issues concerning immediate interests of minority residents (e.g., LA, HD and resettlement), the affected persons should be consulted actively and timely.

3) At the operation stage, the grievance redress mechanism should be made readily available to minority residents at such places as village committees and stores. Objections from few community members should be treated seriously and handled properly to avoid conflicts.

4) A sound participatory M&E mechanism should be established to learn project progress, minority residents’ grievances and expectations, etc. In M&E, potential impacts (positive or negative) of the Subproject on minority residents should be addressed, and a feasible minority participation plan developed to encourage their participation.

5.3 Grievance Redress Mechanism

Any complaints or grievances of the local community people—project beneficiaries (PB) or affected parties (AP) including the EMs—during the Project will be handled in accordance with the grievance redress procedure established below. An appeal can progress through a number of stages if the appellant is not satisfied with the initial response. The procedure will remain valid throughout the Project’s construction period. The basic grievance procedures established in the EMDP include the following steps.

Stage 1: If any ethnic minority, including PB and AP, is dissatisfied with the action plan, he/she can file an oral or written appeal to the village committee or township resettlement office orally or in writing. In case of an oral appeal, the village committee or township resettlement office shall handle such appeal and keep written records. Such appeal should be solved within one week.

Stage 2: If the ethnic minority is dissatisfied with the disposition of Stage 1, he/she may file an appeal to Huaxi District Government after receiving such disposition, which shall make a disposition within two weeks.

Stage 3: If the ethnic minority is still dissatisfied with the disposition of Stage 2, he/she may file an appeal to Zhushui Company after receiving such disposition, which shall make a disposition within two weeks.

Stage 4: If the ethnic minority is still dissatisfied with the disposition of Stage 3, he/she may file an appeal to the Guiyang PMO after receiving such disposition, which shall make a disposition within two weeks.

Alternatively and at any time, the PB or AP can appeal to the civil division of a people’s court according to the civil procedural law. The PB or AP will be informed of the result via written notice.

The aggrieved ethnic minority can also put forward grievance to external monitoring and evaluation agency, the external agency reports it to project management office. Or the aggrieved ethnic minorities can put forward grievance to project team of ADB. If good faith efforts are still unsuccessful and if there are grievances that stem from non-compliance with ADB’s safeguard policy on indigenous people, the aggrieved ethnic minority may submit a complaint to ADB’s Office.
of Special Project Facilitator or Office of Compliance Review in accordance with ADB’s Accountability Mechanism (2012).⁴

All agencies will accept grievances and appeals from the APs for free, and costs so reasonably incurred will be disbursed from the contingencies. During the whole construction period of the Subproject, these appeal procedures will remain effective to ensure that the APs can use them to address relevant issues. The above grievance redress mechanism will be communicated to the ethnic minority at a meeting or through the RIB, so that the APs know their right of appeal. In addition, the appeal process will be published to affected population on mass media.

The contact information of the PMO and related unites can be seen in Table 5-2.

<table>
<thead>
<tr>
<th>Units name</th>
<th>Contact</th>
<th>Position</th>
<th>Contact information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guiyang PMO</td>
<td>He yin</td>
<td>Minority Leader</td>
<td>085186989312</td>
</tr>
<tr>
<td>Guiyang Zhushui Water Resources Industrial Development Co., Ltd.</td>
<td>Fu libo</td>
<td>Minority Leader</td>
<td>18685174812</td>
</tr>
<tr>
<td>Huaxi Dist. Resettlement Bureau</td>
<td>Wang Yin</td>
<td>Director</td>
<td>13985577478</td>
</tr>
<tr>
<td>Township resettlement Station</td>
<td>Ban Shixiu</td>
<td>Head of township</td>
<td>13985158858</td>
</tr>
<tr>
<td>Armed Forces Department in Meng Guan Town</td>
<td>Yang Zuorong</td>
<td>head of the department</td>
<td>085183960115</td>
</tr>
</tbody>
</table>

⁴ For further information, see http://www.adb.org/Accountability-Mechanism/default.asp.
6. Action Plan

6.1 Measures to Enhance Positive Benefits

1. Allocating job opportunities rationally

Jobs generated by the Subproject will be first made available to households affected by LA and HD for the Subproject. At the construction stage, not less than 30% unskilled jobs will be first made available to local vulnerable groups, including ethnic minorities, women and the poor. During employment, the provisions of the labor law on remuneration and personal safety will be complied with. In addition, local women are encouraged to offer catering and other services to increase income.

2. Strengthening training and education, and developing characteristic minority industries

1) Beautiful countryside building: Maling Village has been included in the beautiful countryside building program of Maling Xiang. In the Subproject, special funds for beautiful countryside building may be coordinated to develop local natural resources and rural tourism.

2) Minority handicrafts training: Traditional Buyi dyeing and other similar training will be offered in conjunction with training offered by the women’s federation to promote the development of rural tourism and increase women’s income.

3) Crop cultivation and management training: Training on the cultivation of commercial crops, crop cultivation and management, pest control, etc. will be offered based on local minority residents’ needs, and using training funds from the agriculture bureau.

4) The time, place, form and language of training will be suitable for minority residents.

6.2 Measures to Reduce Potential Risks

1. Developing livelihood and income restoration programs to reduce LA and HD risks

1) LA and HD will be minimized in project design and implementation, and full compensation provided to the APs;

2) Livelihood and income restoration measures will be taken to minimize resettlement impacts;

3) Resettlement programs will be based on the APs’ comments and suggestions;

4) Women will have the right to receive LA and HD compensation fees as men do;

5) Characteristic minority tourism will be developed in combination with the natural landscape around the reservoir.

2. Strengthening publicity to ensure construction safety, and protecting local residents' lives from construction

1) During construction, the construction staff will respect local minority customs to avoid conflicts; The construction camp will be separated from civil residences to reduce living and entertainment overlapping. Minority workers’ customs will be respected, and a separate cooking range may be set up for them. The construction camp will be managed properly, overnight outing avoided where possible, and wastewater and solid waste collected timely and disposed of properly to avoid pollution to the local environment.

2) The construction agency will take noise reduction measures, set up non-horning signs in villages, and minimize overnight construction;

3) Construction information will be notified to local residents in advance, and safety protection measures taken;
4) Safety signs will be set up on important road segments;
5) Construction safety management will be included in the construction contract, and safety education on the construction staff strengthened.

3. Maintaining the health of the construction camp to avoid infectious diseases (ie. AIDS)
   1) The construction agency will keep the ambient environment clean;
   2) The construction staff will be subject to initial physical checkup to prevent infectious diseases;
   3) Health monitoring files will be established for the construction staff;
   4) The disease control center will give publicity and education on the construction site.
   5) Construction workers will be examined on the awareness of AIDS prevention and dissemination.

4. Meeting downstream water demand
   1) During construction, diversion tunnels will be constructed to ensure the domestic and irrigation water demand of downstream residents;
   2) At the early stage of water storage, an adequate and stable river discharge will be maintained to meet environmental water demand;
   3) At the operation stage, the dependability of ecological water will be increased.

5. Taking measures to avoid water pollution
   1) The reservoir bottom will be cleaned up thoroughly before water storage, and domestic wastewater prohibited from being discharged into the reservoir;
   2) Domestic waste will be disposed of and transferred regularly, and related publicity and education strengthened to ensure that domestic waste is not dumped at will;
   3) The PMO and agriculture bureau will work closely to give publicity and education on environmental protection to local residents, thereby reducing the use of fertilizers and pesticides, and control pollution.

6. Alleviating environmental and public security pressure from floating population
   1) The EMP will be implemented strictly to minimize potential environmental risks;
   2) A good construction environment will be created;
   3) The owner and construction agency will strengthen publicity and education, and handle relations between the construction staff and local residents, especially minority residents.

7. Alleviating impacts on traditional culture and enhancing community cohesion
   1) Traditional culture will be preserved through publicity, education and minority activities;
   2) During resettlement, special consideration will be given to APs to be relocated with family members in order to protect existing family relations;
   3) Adequate consultation will be conducted with families relocated as a whole, especially with prestigious elders;
   4) The village committees will treat APs and non-APs equally in employment, training and education; and
   5) The allocation of public resources, such as land and public services, should be handled fairly.

6.3 Financial Budget
   Funds required for the implementation of this EMDP will come from the budget of the Subproject (including the budgets of the RP and EMP), governmental finance, special funds of departments concerned, and raised social funds.
<table>
<thead>
<tr>
<th>Action</th>
<th>Population</th>
<th>Implemented by</th>
<th>Stage</th>
<th>Actions</th>
<th>Funding</th>
<th>Monitoring indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I. Measures to Enhance Positive Benefits</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Allocating job opportunities rationally</td>
<td>(1) Water supply area: ethnic minority population of 20,094 in Mengguan, Qingyan and Ergezhai Towns, including 5,597 Miao people, and 8,317 Buyi people. (2) Irrigation area: 4,956 persons in Maling Village, Maling Township, including 855 Buyi people and 570 Miao people</td>
<td>PMO, construction agency, women’s federation, ethnic and religious affairs bureau, township governments, village committees, Guiyang zhushui water resources industrial development co.,ltd(zhushui).</td>
<td>Construction</td>
<td>1) Jobs generated by the Subproject will be first made available to households affected by LA and HD. 2) At the construction stage, not less than of 30% unskilled jobs will be first made available to local vulnerable groups, including ethnic minorities, women and the poor. During employment, the provisions of the labor law on remuneration and personal safety will be complied with. 3) Local women are encouraged to offer catering and other services to increase income.</td>
<td>Project budget, special funds of agencies concerned; 0.2 million.</td>
<td>1) Proportion of APs placed to unskilled jobs 2) Men-times of local vulnerable groups placed to unskilled jobs</td>
</tr>
<tr>
<td>2. Strengthening training and education, and developing characteristic minority industries</td>
<td>(1) Water supply area: ethnic minority population of 20,094 in Mengguan, Qingyan and Ergezhai Towns, including 5,597 Miao people, and 8,317 Buyi people. (2) Irrigation area: 4,956 persons in Maling Village, Maling Township, including 855 Buyi people and 570 Miao people</td>
<td>PMO,zhushui, agriculture bureau, ethnic and religious affairs bureau, women’s federation, township governments, village committees</td>
<td>Construction</td>
<td>1) Beautiful countryside building: In the Subproject, special funds for beautiful countryside building may be coordinated to develop local natural resources and rural tourism. 2) Minority handicrafts training: Traditional Buyi dyeing and other similar training will be offered to promote the development of rural tourism and increase women’s income. 3) Crop cultivation and management training: Training on the cultivation of commercial crops, crop cultivation and management, pest control, etc. will be offered. 4) The time, place, form and language of training will be suitable for minority residents.</td>
<td>Funds of agriculture bureau, women’s federation, ethnic and religious affairs bureau;1.5 million.</td>
<td>1) Progress of beautiful countryside building 2) Training records 3) Frequency and scope of training, number of trainees, and proportion of minority residents and women trained 4) Times, places and modes of training</td>
</tr>
<tr>
<td><strong>II. Measures to Reduce Potential Risks</strong></td>
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<tr>
<td>1. Developing</td>
<td>184 households with</td>
<td>PMO, zhushui, design</td>
<td>Construction</td>
<td>1) LA and HD will be minimized in</td>
<td>Project budget, 1) Have the APs</td>
<td>2)</td>
</tr>
<tr>
<td>Action</td>
<td>Population</td>
<td>Implemented by</td>
<td>Stage</td>
<td>Actions</td>
<td>Funding</td>
<td>Monitoring indicators</td>
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</tr>
<tr>
<td>livelihood and income restoration programs to reduce LA and HD risks</td>
<td>731 persons in Geyue Natural Village in the inundated area; and 8 households with 25 persons in Hongxing Village affected by Mengguan WTP component</td>
<td>agency, township governments, village committees</td>
<td></td>
<td>project design and implementation, and full compensation provided to the APs; 2) Livelihood and income restoration measures will be taken to minimize resettlement impacts; 3) Resettlement programs will be based on the APs’ comments and suggestions; 4) Women will have the right to receive LA and HD compensation fees as men do; 5) Characteristic minority tourism will be developed in combination with the natural landscape around the reservoir.</td>
<td>special funds of agriculture bureau, women’s federation, ethnic and religious affairs bureau, etc. 1 million.</td>
<td>received full compensation? 2) Participation in the Subproject 3) Comments on resettlement programs 4) Can women receive LA and HD compensation fees? 4) Livelihood and income restoration measures</td>
</tr>
</tbody>
</table>
| 2. Strengthening publicity to ensure construction safety, and protecting local residents’ lives from construction | (1) Water supply area: ethnic minority population of 20,094 in Mengguan, Qingyan and Ergezhai Towns, including 5,597 Miao people, and 8,317 Buyi people  
(2) Irrigation area: 4,956 persons in Maling Village, Maling Township, including 855 Buyi people and 570 Miao people | PMO, zhushui, design agency, construction agency, township governments, village committees | Construction | 1) During construction, the construction staff will respect local minority customs to avoid conflicts; The construction camp will be separated from civil residences to reduce living and entertainment overlapping. Minority workers’ customs will be respected, and a separate cooking range may be set up for them. The construction camp will be managed properly, overnight outing avoided where possible, and wastewater and solid waste collected timely and disposed of properly to avoid pollution to the local environment.  
2) The construction agency will take noise reduction measures, set up non-horning signs in villages, and minimize overnight construction; 3) Construction information will be notified to local residents in advance, | Project budget 0.2 million. | 1) Records of conflicts between the construction agency and local residents  
2) Noise reduction measures taken  
3) Frequency of overnight construction  
4) Noise standard  
5) Number of non-horning signs  
6) Disclosure of construction information and safety management |
<table>
<thead>
<tr>
<th>Action</th>
<th>Population</th>
<th>Implemented by</th>
<th>Stage</th>
<th>Actions</th>
<th>Funding</th>
<th>Monitoring indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Maintaining the health of the construction camp to avoid infectious diseases</td>
<td>(1) Water supply area: ethnic minority population of 20,094 in Mengguan, Qingyan and Ergezhai Towns, including 5,597 Miao people, and 8,317 Buyi people; (2) Irrigation area: 4,956 persons in Maling Village, Maling Township, including 855 Buyi people and 570 Miao people</td>
<td>PMO, zhushui, construction agency, disease control center, township governments, village committees</td>
<td>Construction</td>
<td>1) The construction agency will keep the ambient environment clean; 2) The construction staff will be subject to initial physical checkup to prevent infectious diseases; 3) Health monitoring files will be established for the construction staff; 4) The disease control center will give publicity and education on the construction site; 5) Construction workers will be examined on the awareness of AIDS prevention and dissemination.</td>
<td>Project budget, special funds of disease control center, etc. 0.6 million.</td>
<td>1) Frequency of cleaning; 2) Initial physical checkup for the construction staff; 3) Establishment of health monitoring files; 4) Publicity by the disease control center</td>
</tr>
<tr>
<td>4. Meeting downstream water demand</td>
<td>Residents downstream the reservoir</td>
<td>PMO, zhushui design agency</td>
<td>Construction &amp; operation</td>
<td>1) During construction, diversion tunnels will be constructed to ensure the domestic and irrigation water demand of downstream residents; 2) At the early stage of water storage, an adequate and stable river discharge will be maintained to meet environmental water demand; 3) At the operation stage, the dependability of ecological water will be increased.</td>
<td>Project budget</td>
<td>1) Availability of diversion channels; 2) Downstream discharge at the early stage of water storage; 3) Downstream discharge at the construction stage; 4) Feedback from downstream residents; 5) Downstream ecological changes</td>
</tr>
<tr>
<td>5. Taking measures to avoid water pollution</td>
<td>Residents around the reservoir</td>
<td>PMO, zhushui, design agency, construction agency, township</td>
<td>Construction</td>
<td>1) The reservoir bottom will be cleaned up thoroughly before water storage;</td>
<td>Project budget, special funds of agriculture</td>
<td>1) Inspection on reservoir cleanup; 2) Discharge of</td>
</tr>
<tr>
<td>Action</td>
<td>Population</td>
<td>Implemented by</td>
<td>Stage</td>
<td>Actions</td>
<td>Funding</td>
<td>Monitoring indicators</td>
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<tr>
<td>6. Alleviating environmental and public security pressure from floating population</td>
<td>(1) Water supply area: ethnic minority population of 20,094 in Mengguan, Qingyan and Ergezhai Towns, including 5,597 Miao people, and 8,317 Buyi people (2) Irrigation area: 4,956 persons in Maling Village, Maling Township, including 855 Buyi people and 570 Miao people</td>
<td>PMO, zhushui, construction agency, public security bureau</td>
<td>Construction</td>
<td>1) The EMP will be implemented strictly to minimize potential environmental risks; 2) A good construction environment will be created; 3) The owner and construction agency will strengthen publicity and education, and handle relations between the construction staff and local residents, especially minority residents.</td>
<td>Project budget, EMP budget, special funds of the public security bureau, etc.0.3 million.</td>
<td>1) EMP implementation 2) Conflicts between the construction staff and local residents 3) Types and frequency of publicity and education, and number of participants 4) Comments on the construction agency and staff from local residents</td>
</tr>
<tr>
<td>7. Alleviating impacts on traditional culture and enhancing community cohesion</td>
<td>(1) Water supply area: ethnic minority population of 20,094 in Mengguan, Qingyan and Ergezhai Towns, including 5,597 Miao people, and 8,317 Buyi people (2) Irrigation area: 4,956 persons in Maling Village, Maling Township, including 855 Buyi people and 570 Miao people</td>
<td>PMO, zhushui, township governments, village committees</td>
<td>Construction &amp; operation</td>
<td>1) Traditional culture will be preserved through publicity, education and minority activities; 2) During resettlement, special consideration will be given to APs to be relocated with family members in order to protect existing family relations; 3) Adequate consultation will be conducted with families relocated as a whole, especially with prestigious elders; 4) The village committees should</td>
<td>Project budget, special funds of the Ethnic and Religious bureau, etc.0.3 million.</td>
<td>1) Frequency of culture publicity and education activities, and number of participants; 2) If opinions and suggestions of family members are respected during resettlement; 3) If APs and non-APs are treated equally in</td>
</tr>
<tr>
<td>Action</td>
<td>Population</td>
<td>Implemented by</td>
<td>Stage</td>
<td>Actions</td>
<td>Funding</td>
<td>Monitoring indicators</td>
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<tr>
<td></td>
<td>Miao people</td>
<td></td>
<td></td>
<td>will treat APs and non-APs equally in employment, training and education; and 5) The allocation of public resources, such as land and public services, will be handled fairly.</td>
<td></td>
<td>employment, training and education; and 4) If public resources are relocated fairly.</td>
</tr>
</tbody>
</table>
7. Monitoring & Evaluation

In order to ensure that this EMDP is implemented effectively as expected, it is necessary to monitor and evaluate the implementation thereof. Minority monitoring includes internal and external monitoring, where internal monitoring will be performed by the PMO semiannually, and it will be reflected in quarterly report, not prepared separately anymore. External monitoring will be performed semi-annually by an independent agency until subproject completion. EMDP monitoring reports will be prepared. See Table 7-1.

<table>
<thead>
<tr>
<th>Monitoring method</th>
<th>Scope of monitoring</th>
<th>M&amp;E agency</th>
<th>Monitoring period and reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>①M&amp;E methods shall include field survey, sampling survey, computational analysis and overall expert assessment; ②The fieldwork will be conducted comprehensively on the implementation progress of the EMDP, availability and effectiveness of funds, institutional and management aspects; ③The subproject area and households (especially ethnic minority households) shall be subject to sampling survey using the classified random sampling method to track typical ethnic minority households regularly. ④The sampling rate shall not be less than 20% of the affected population, in which the proportion of ethnic minority households shall not be less than 50% of all sample households; to collect relevant information, complete the impact form and compare with the existing EMDP data, a socioeconomic survey and a resettlement survey shall be conducted. ⑤In addition to written materials, photos, videos, audio records and physical objects shall also be collected to establish a database of public participation and results.</td>
<td>The external M&amp;E agency shall conduct monitoring semiannually during the implementation of the EMDP, with focus on the following activities: ①Are the right of the ethnic minorities and minority groups to participate in the subproject equally guaranteed practically? ②Are the linguistic and cultural rights of the ethnic minorities respected? ③Which specific measures have the local PMOs taken according to the MEGDP? How effective are these measures? ④How do the ethnic minorities and minority groups evaluate these measures? ⑤How does the main population evaluate these measures? ⑥Is an MEGDP M&amp;E mechanism in place? Does it work?</td>
<td>Internal monitoring will be performed by the PMO, and external monitoring by a qualified independent M&amp;E agency. Guiyang Water Resources &amp; Transportation Development Investment Group Co., LTD. undertake monitoring cost; Budget is about 1.2 million.</td>
<td>The semiannual internal M&amp;E reports will be reflected in quarterly report, not prepared separately anymore; the yearly external M&amp;E reports will be submitted to ADB by the external M&amp;E agency employed. The reporting schedule of external M&amp;E is as follows: The first EMDP M&amp;E report (baseline survey) has been submitted in October 2017; an M&amp;E report will be submitted annually during 2018-2019; a summary evaluation report will be submitted after the completion of the Subproject.</td>
</tr>
</tbody>
</table>
Appendixes

Appendix 1 Distribution of Survey Sites

The door-to-door socioeconomic survey, and FGDs covered Maling Village, Maling Xiang; Qingyan Town; communities near Xiaomeng Industrial Park in Huaxi District; stores and communities in and around Ergezhai Logistics Center in Nanming District, as shown below:
Appendix 2 Interview Minutes

Key informant interview: Secretary of Maling Village, Maling Xiang, Huaxi District

Date: August 4, 2014

Venue: Maling Village Committee, Maling Xiang

Interviewee: Secretary Chen

Key points:

1. Basic information
   Maling Village is located in the center of Maling Xiang, governs 9 village groups, and has 1,214 households with 4,956 persons, including 3,032 laborers, and 345 minority households, accounting for 28.42%, mostly Buyi people, which account for 60% of minority population. The village has 70 households receiving minimum living security with 312 persons, and 10 five-guarantee households, a primary school, and a high school.

2. Cultivated land and cultivation
   The village has 1,600 mu of cultivated land, including 623 mu of irrigated land, 0.42 mu per capita. The main crops are paddy rice, corn, watermelon and vegetables.

3. Employment and income
   Villagers’ main income sources are outside employment and crop cultivation. 30% of laborers work outside, mostly in coastal cities and provinces like Shanghai, Guangdong and Fujian, dealing with catering, housekeeping, construction, etc. Those working locally are paid usually 150 yuan/day for skilled jobs or 130 yuan/day for unskilled jobs. In 2013, farmers’ per capita net income was 7,315 yuan.

4. Training
   In the first half of 2014, sewing training was offered in the village for one month, involving 100 women, with a working time loss subsidy of 40 yuan/day. The training was offered in leisure time in farm work, and in the forms of classroom lecture and material distribution. The training proved effective. The agriculture bureau and agritechnical extension center also offered crop cultivation, stockbreeding and production skills training to villagers. Through training, villagers have improved their labor skills and increased the output of farm products generally.

5. Attitude to the Subproject
   The Subproject is a public welfare project that is known to almost all villagers, who support is highly, and are willing to work for it as long as suitable jobs are available.

6. Future plan
   After the village is relocated after reservoir completion, more intensive employment skills training will be offered, along with agritainment development and extended fruit cultivation in order to change villagers’ income patterns.
Interview of a Buyi villager of Maling Village, Maling Xiang, Huaxi District

Date: August 8, 2014
Venue: Geyue Natural Village, Maling Village, Maling Xiang
Interviewee: Ms Wang, a Buyi villager

Key points:
1. Basic information
   Ms Wang, 38 years, Buyi, lives in a 4-member family. She has two children, in which her elder son is at senior high school and her younger daughter at junior high school. Her husband is working elsewhere and she has to do farm work at home alone.

2. Financial status
   The family has about 20 mu of land, including cultivated land and woodland, used to grow corn, paddy rice and watermelon only. When there is no farm work, she would work with her husband, who has a regular job at a hardware factory in Zhejiang Province. The family’s annual income is about 70,000 yuan. However, educational and (non-local) living expenses are high.

3. LA and HD impacts
   The family’s house is within the inundated area, over 100 m² in size, in masonry timber and masonry concrete structures mainly. 12 mu of land has been acquired, on which corn and paddy rice are grown, making almost no profit. She knows somewhat about compensation and resettlement, but is not very clear.
   She prefers to live together with her former neighbors in the future, so that they can take care of each other.

4. Public participation
   She knew about the Subproject during the DMS in 2013, and supports it as long as compensation and resettlement is reasonable.
   She expects to develop an agritainment site and will not work outside.
Appendix 3 Fieldwork Photos

Fieldwork in the inundated area

Interview of a women in the inundated area

Interview of a Buyi villager in the inundated area

FGD in Maling Village

FGD in Geyue Village Group

Upstream water storage area
<table>
<thead>
<tr>
<th>Image</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Interview of a Miao woman in the affected area" /></td>
<td>Interview of a Miao woman in the affected area</td>
</tr>
<tr>
<td><img src="image2" alt="Paddy rice and corn planted in the affected area" /></td>
<td>Paddy rice and corn planted in the affected area</td>
</tr>
<tr>
<td><img src="image3" alt="Interview with an official of the Huaxi District Ethnic and Religious Affairs Bureau" /></td>
<td>Interview with an official of the Huaxi District Ethnic and Religious Affairs Bureau</td>
</tr>
<tr>
<td><img src="image4" alt="Interview of Miao residents in the water supply area" /></td>
<td>Interview of Miao residents in the water supply area</td>
</tr>
<tr>
<td><img src="image5" alt="DMS notice" /></td>
<td>DMS notice</td>
</tr>
<tr>
<td><img src="image6" alt="Bulletin on compensation for ground attachments" /></td>
<td>Bulletin on compensation for ground attachments</td>
</tr>
</tbody>
</table>