

Ethnic Minorities Development Plan

Huaxi Reservoir Soil and Water Conservation Project Ethnic Minorities Development Plan
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Prepared by Black & Veatch (Asia) Ltd., in conjunction with the Guiyang Municipal Government for the Asian Development Bank (ADB).

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**GUIYANG INTEGRATED WATER RESOURCES
MANAGEMENT PROJECT
IN THE
PEOPLES REPUBLIC OF CHINA**

Ethnic Minorities

Development Plan

**Huaxi Reservoir Soil and Water
Conservation Subproject**

September 11, 2006

[FINAL DOCUMENT TO BE ISSUED BY]

GUIYANG MUNICIPAL GOVERNMENT

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ENDORSEMENT OF THE ETHNIC MINORITIES DEVELOPMENT PLAN

DRAFT

The Guiyang Municipal Government has requested, via the Central Government of the Peoples Republic of China, a loan from the Asian Development Bank (ADB) to finance part of the Guiyang Integrated Water Resources Management Project. The Project will therefore be implemented in accordance with the social safeguards policies of the ADB. This Ethnic Minorities Development Plan (EMDP) represents a key requirement of the ADB. The EMDP presents the situation and actions to be taken to comply with social safeguards concerning ethnic minorities for the subproject. It includes procedures for implementation and monitoring to ensure that the EMDP prepared for this subproject of the sector loan will be effectively executed.

The Guiyang Municipal Government hereby endorses the attached EMDP and guarantees that funds will be made available as stipulated in the budget. The Guiyang Municipal Government authorizes Project Management Office for the Guiyang Integrated Water Resources Management Office as the responsible agency to implement the project and related EMDF activities.

Approved on 26 September 2006

_____, Guiyang Municipal Government
(original signed)

SUMMARY ETHNIC MINORITIES DEVELOPMENT PLAN

A. Introduction

This plan is prepared to better safeguard the affected people. Within the Project area (SPA), 30.14% of the affected populations are ethnic minorities. Adequate provisions to enhance the economic conditions of vulnerable groups have been integrated in Project design. Current government policies and programs further help to protect and enhance project benefits to ethnic minority groups.

Guiyang Water Resource Bureau, with the assistance of PPTA consultants and the design institutions, had constantly consulted the affected people and their communities, the Guiyang Municipal and the project county governments and their line agencies. The consulted line agencies included ethnic minority affairs bureau, poverty reduction office, land administration bureau, reform and development bureau (i.e., planning bureau), water resource bureau, the women's federation, etc. This document, therefore, represents the joint decisions of both GM and project area authorities.

B. Ethnic Minorities in the Project Area

Total minority population in PA is estimated to be 6,104 or 30.14% of the total population by 2004, which is twice the average municipal proportion of 15.4%. All the ethnic minority population in the project area is Miao.

C. Socioeconomic Characteristics of the Ethnic Minorities

Ethnic Minorities live in harmony in the area and inter-marriages are common between Miao and Han. Miao people in the project area have nearly all the distinctive characteristics of Miao Minority in China. They have their own language with various dialects. They celebrate special festivals of their own during the year. Some people, especially women, wear distinctive ethnic clothing, at least on some occasions. In the subproject area, most agricultural and other livelihood activities are very similar for ethnic minorities and ethnic Han people.

Income and Poverty. The net income per capita in the rural area is CNY1, 874.

Gender Aspects. Gender group discussion indicates a good equity or at least an ever-improving equity status between rural women and men. Farming activities are shared by men and women, while women have primary responsibility for domestic activities and men for arduous farming activities. The family income is usually jointly managed by husband and wife, while women play more roles in the decision-making of family income and expenditure. The rate of divorce is low because people find their husbands or wives by their own will, which also indicates that women have a good social position at their families.

Migration. The locals are accustomed to go outside of the village as migrant workers for additional family income during the non-farming seasons, and stay in the village for farming activities during farming season. There is no difference between the Han people and ethnic minority people for finding a job as migrant worker. Most of them are engaged in the assignment with no or little requirements for skills and technology.

D. Impacts of Resettlement

As there is no land acquisition and resettlement for the subproject, the minor negative impacts might come from loss of standing crops and the income loss in the short period of construction of transformation of hillside farmland into terrace. The standing crops will be compensated at the replacement value, while the construction will be carried out as much as possible in the non-farming seasons.

E. Overall Impact and Minority Beneficiaries

The project will have minor negative impacts and more positive impacts of improving agricultural irrigation conditions, reforming the agricultural production pattern, enhancing water and soil conservation and benefiting the ecological environment.

The project will directly benefit 6,104 local residents, of which, 1,840 are ethnic minority people.

F. Expectations and Concerns

The overall conclusion from public consultation is that the needs and aspirations of ethnic minorities in the project area are the same as their Han neighbors. They want improved agricultural production conditions by transforming the farmland for conservation of water, soil and fertility. They want better living conditions by preventing water and soil erosion. They want to readjust agricultural production pattern by developing economic/fruit tree plantation, economic crops such as Chinese herbs, and livestock breeding, so as to improve the household income and livelihood in the implementation of program 'returning farmland to forest'. They want to be fully included in project activities and are similarly interested in participating in construction activities.

G. Action Plan

The Project will apply a mainstreaming strategy to ensure full participation of ethnic minority people and ensure that any persons affected by land acquisition and resettlement are better off after the project. Table 10: EMDP Action Plan presents the main ways in which the project will have impacts on ethnic minority people, targets, number of ethnic minority people affected, budget information, and timing.

H. Implementation Arrangement, M&E

The PMO, and Huaxi Water Resource Bureau, the Implementing Agency, and the contractors, will play a leading role in implementing most of the construction-related measures previously presented. County governments will take the leading role in implementing the supportive measures such as agricultural extension, rural infrastructure improvement, etc.

The PMO will monitor the targets identified in the EMDP and update information as implementation proceeds. An independent external monitoring agency will be engaged in the annual review of ethnic minorities development in the project and may be asked to advise if specific needs are identified.

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ETHNIC MINORITIES DEVELOPMENT PLAN

1. INTRODUCTION

1.1 Project description

1. The Guiyang Integrated Water Resources Management Project will 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.

2. The project is expected to have substantial positive impacts on ethnic minority people in providing improved supplies of water for domestic use and irrigation. Subprojects developed under the project should reduce poverty by providing reliable access to clean water for drinking, bathing and other domestic use, and water for irrigating crops for household consumption and for sale, including expansion in profitable cultivation of high-value crops such as vegetables, flowers, herbs, fruits. A significant number of ethnic minority people will be affected by land acquisition and resettlement, with measures undertaken to ensure that adverse impacts are mitigated and they are beneficiaries of the project.

3. The Project will invest with CNY 2.4 billion (\$ 300 million) for the construction of medium and small reservoirs, dams, agriculture irrigation systems, urban and rural water supply schemes, rainwater collection structures, and soil and water conservation. The Project is planned to be implemented over 5 years. The proposed Project aims to:

- (i) improve reliable and safe water supply, support economic and social development in response to the demands on water resources, and to promote the comprehensive management and optimized allocation of water resources;
- (ii) raise grain output, speed up rural economic development, promote the construction of new socialist countryside, and to structure harmonious society; and
- (iii) protect water resources, improve ecological environment, and to ensure the sustainable utilization of water resources.

4. The Project includes the following components:

- (i) establishment of one medium-sized and 2 small-sized reservoirs for urban water supply, including construction of dams, water conveyance tunnels, transmission pipelines, water treatment plants, and extension of the municipal water distribution networks;
- (ii) construction of 43 small reservoirs for rural water supply and irrigation, water conveyance systems, small township treatment facilities, and irrigation systems;
- (iii) rehabilitation and upgrading of 9 irrigation schemes in 5 areas including installation or repair of intake structures, canals and aqueducts;
- (iv) provision of 127,890 small water storage structures (ponds, tanks, and cisterns) in rural areas to store spring water for humans and livestock and rainfall run-off for irrigation; and
- (v) protection from water and soil losses in the upper catchments of the water sources (800 km²) with farm land restructuring, conversion of sloping farmland to terraces, tree or grass planting areas, and fruit tree planting.

5. During the PPTA stage, six core subprojects have been selected:

1. Yudongxia Reservoir Urban Water Supply Subproject,
2. Jinlong Reservoir County Water Supply Subproject,
3. Liaojiuzhai Reservoir Water Supply and Irrigation Subproject,
4. Wudang District Midsize Irrigation System Rehabilitation Subproject,
5. Xifeng County Small-scale Water Storage Subproject, and
6. Huaxi Reservoir Soil and Water Conservation Subproject.

6. On the basis of the review of six selected core subprojects by PPTA consultant and Guiyang Project Management Office (GPMO), four core subprojects are to have ethnic minorities development plans. Ethnic minorities development plans for Yudongxia and Jinlong Reservoirs, Wudang Irrigation Rehabilitation and Huaxi Water and Soil Conservation are needed as part of the project preparation.

1.2 Subproject description

7. The Huaxi District is located on the southern part of GM, neighboring Longli County on the east, Changshun County and Huishui County on the south, Qingzhen City and Pingba County on the west, and Wudang District, Xiaohe District and Nanming District on the north.

8. According to the data of 2000, the total land area of the whole district reaches 976.84 sq km, mainly characterized by hills and mountains. The total area of the cultivated land is 11,849 ha. Under the administration of Huaxi District are 3 towns and 11 townships, of which, 7 are ethnic minority townships. These are Malin Bouyei and Miao, Huaxi Bouyei and Miao, Gaopo Miao, Qiantao Bouyei and Miao, Mengguan Miao and Bouyei, Xiaobi Bouyei and Miao, and Huchao Bouyei and Miao ethnic minority autonomous townships. Under the 14 town/townships are 19 residents' committees and 65 village committees, with a total population of 313,400 of which the agricultural population is 230,800, non-agricultural population being 82,600 and ethnic group population being 102,600, about 32.7% of the population.

9. The economic development of Huaxi District is characterized by agriculture at present time. In 2003 the total production output of the whole district is worth CNY 3,130 million, of which the output of primary industry is CNY 457 million, that of secondary industry is CNY 1,179 million, and that of tertiary industry is CNY 1,493 million. The rate of economic development of Huaxi District ranks the second in Guiyang Municipality. As Huaxi District is located in the near suburbs of Guiyang City, it has an advantage of being accessible to Guiyang City. As a result, vegetables, fruits and varieties of famous brand and special products have become the leading agricultural products in Huaxi District. So, planting industry occupies a considerably important position in the primary industry. In 2003 the sown area of farm crops reached 245,400 mu and the production output came up to 81900 ton.

10. The telemetric data in 2000 that the area suffering from water and land loss is 436.44 sq km, 42.6% of the total land, 319.17 sq km of land is exposed to slight water and soil loss, 110.06 sq km to medium water and soil loss, and 7.21 sq km to strong water and soil loss, no area to extreme water and soil loss.

11. Huaxi Reservoir Soil and Water Conservation Subproject (the Subproject) is located in the west part of Huaxi District, the upstream area of Huaxi reservoir. It will include Longshan village in Dangwu township, Gairong village, Huajie village and Ludi village in Shibantown, Chetian village in Huchao Bouyei and Miao Autonomous Township, and Tian'e village in Guizhu Resident Committee. The Subproject has a total area of 2,331 ha, of which, 1,506 ha, 64.62% of the total land is water and soil erosion land. The average erosion

modulus is 1,804t/km²a, with an average soil erosion volume of 27,175 tons. Based on the detailed site survey, and judged by the Classified Criterion of Soil Erosion, the water and soil erosion in the Subproject is 284.97 ha of slight erosion, 18.9% of total erosion area, 869.02 ha of medium erosion, 57.7% of total erosion area, 352.4 ha of strong soil erosion, 23.4% of total erosion area.

12. The area to be treated by the Subproject is 1,506.39 ha. The Subproject comprises of the following components.

- (1) Transformation of hillside farmland of terraces of 230.6 ha, equipped with 115 water tanks, 115 sand sediment pools, 18km-long tractor roads, and 28km-long irrigation channels; 4.3 km-long flood drainage channels; 1 dam with a length of 78m;
- (2) Economic/fruit Tree Plantation on an area of 114.49 ha: the slope of 15-25 degree, whether farming or not, will be planted by economic/fruit trees as peach, plum, etc;
- (3) Establishing 350.78 ha water conservancy forest: on the slope over 25 degree by planting trees as Camphor, Japanese Pagoda, etc., or grass; and
- (4) Establishment of 810.52ha forest protection by issuing embargo of farming and tree-cutting

13. Implementation of the subproject is scheduled to be undertaken in the slack season of agricultural production between 2007 and 2008, and the construction activities of transformation of hillside farmland of terraces and economic/fruit tree plantation will be carried out in the spring season in 2007. All the components of the subproject will be simultaneously implemented in the subproject area.

14. The total investment of subproject will be CNY 10,886,354.

1.3 Objectives of the EMDP

15. This Ethnic Minorities 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 as well as access restrictions to the area now considered as protection forest.

1.4 Policy Framework

16. This Ethnic Minorities 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 Peoples Republic of China (PRC) and the Asian Development Bank Policy on Indigenous Peoples, including Policies and Procedures in the ADB Operations Manual. The 1949 PRC Constitution 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 level, 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."

2. ETHNIC MINORITIES IN THE SUBPROJECT AREA

2.1 Population

17. Huaxi District is an area mixed with 38 nationalities, including Han, Miao and Bouyei. Of the total population that is 324,100, 115,924 (34.38%) persons are ethnic minority. The ethnic minorities have their different festivals celebrated in the specific location by performing various shows.

18. There are 1,604 households in the Subproject area with a population of 6,104, of which, 3,706 being male and 3,028 female. Of the total population, there are 1,804 ethnic minority people in the Subproject area. Although ethnic minority accounts for only 1.6 per cent of the ethnic groups in Huaxi District, the ethnic minority population forms 30.14 per cent of the population in the subproject area. Table 1 shows the number of ethnic minority people living in the project area, all of them are Miao. The subproject area covers six administrative villages, that is, Gairong, Huajie, Ludi, Chetian, Longshan, and Tian'e. One of the villages, Chetian village in Huchao township is an ethnic minority village. In the other villages, the proportion of ethnic minority population is more than 10%, while the highest proportion of 43.01% in Gairong village, and the second of 40.05 in Tian'e village.

Table 1: Ethnic Minority Population in the Subproject Area

Village	Total Population	Ethnic Minority Population	%	Miao (Largest ethnic group)	(2 nd Largest ethnic group)	Other ethnic groups
Gairong	1516	652	43.01	652	0	0
Huajie	936	94	10.04	94	0	0
Ludi	1506	392	26.03	392	0	0
Chetian	574	144	25.09	144	0	0
Longshan	708	212	29.94	212	0	0
Tian'e	864	346	40.05	346	0	0
Total	6104	1840	30.14	1840	0	0

Source: Information from village committees

2.2 Socioeconomic Characteristics

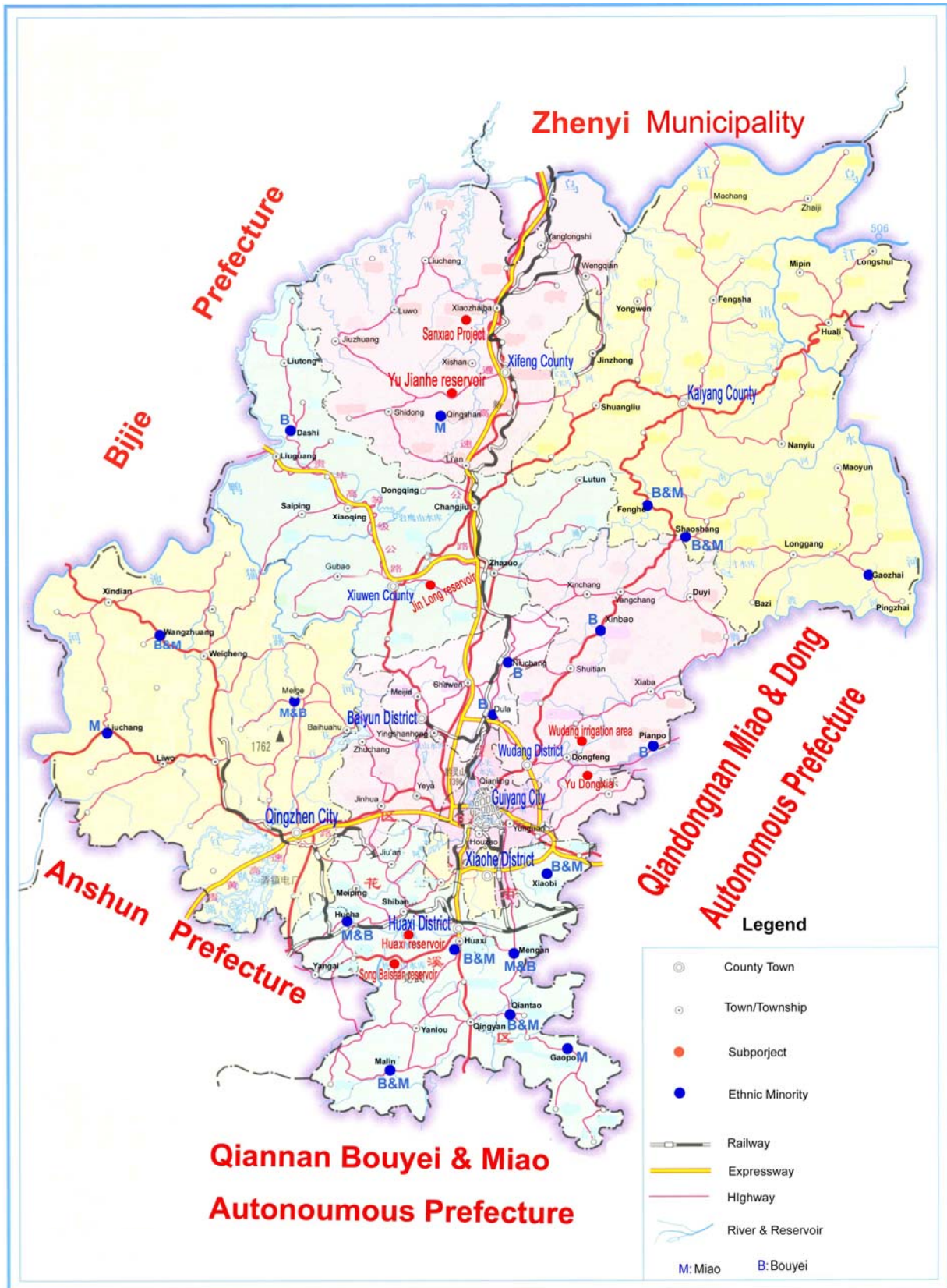
19. In the Subproject area, the average per-capita farmland is 0.11 ha. It is characterized by thin soil and barren layer, severe water and soil loss, and poor ecological environment, resulting in bad conditions of agricultural production and limited capacity of agricultural yield. The main crops planted are paddy rice, maize, wheat, rapeseed and among others, and fruit production is limited to household yards. Economic crops are chili and other vegetables. The social survey results indicate that the output value of primary industry in the subproject area is CNY1,192 million, of which, agricultural output value is CNY7.78 million. The per capita net income in the rural area is CNY1,874. The primary industry composition is 65.2% of agriculture, 1.9% of forestry, 31.3% of livestock breeding, and 1.4% of others, i.e. structure of 1:0.03:0.48:0.02.

20. The economic/fruit trees are planted in the limited area of front and back yard of farmers' homes. Because of the restrained factors of natural and socio-economic conditions in the subproject area, the productivity of forestry is quite low. The main purposes of the forest are retaining water resources, greening the environment, and conservation of water and soil.

21. Livestock breeding is mainly household based. Domestic animals such as pigs, cattle and poultry are raised by individual households on a small scale with animal feeds from the market. The animal breeding is usually for provision of farming animal and organic fertilizer.

Most of the domestic animal will be consumed by farmers, and some are sold to the market for a considerable economic profit.

Figure 1: Location Map of Huaxi Subproject Showing Ethnic Minority Distribution



22. The existing problem in the subproject area is mainly dependent on agricultural production of farming in traditional mode mainly relying on human energy. The majority of the crops planted is paddy rice, maize, and wheat, with few economic crops. The paddy fields are in scattered small plots with most irrigation from pumping water, which increases the cost of agricultural production. The other cash income of the farmers in the subproject area is from migrant work or temporary employment, but such income is limited. The proportion of industrial and agricultural sideline products is quite small. Integrating the natural resources in the area, more efforts shall be given to the development of industry and agricultural side-products, so as to promote its economic development.

23. Based on official statistics, the poverty population accounts for 4.03% of the total beneficiary population in the irrigation area; and the income of the poor population (based on the poverty line of CNY720 per capita) is 38.4% of the average per capita income. Because of the restricted natural conditions, inaccessible traffic and information, poor productive mode and lack of development, the rural poverty population is behind in social development. Remoteness is the natural factor for the development of the rural poor. The rapid participatory assessment indicates that the poor transport access, thin soil, severe water scarcity, and soil loss are the most restrictive factors for the economic development in the area.

24. This subproject will become a motivating force to help the rural poor in attaining prosperity. Aiming at stably solving the problem of food and clothing of the poor masses, it is needed to perfect water infrastructure, strengthen agricultural training, adjust planting structure and improve the basic conditions of production and living in the poor areas. Thus, the construction of harmonious society will be pushed forward in an all-round way.

Table 2: Poverty Data for the Subproject Area

Village Name	Male	Female	Total	Persons below poverty line	Persons receiving minimum livelihood subsidy	Female household heads, registered (de jure)	Female household heads, de facto, (estimate)	Beneficiaries (est.)	Beneficiaries below poverty line (est.)
Gairong	764	752	1516	75	5	8	24	1516	75
Huajie	472	464	936	46	3	6	16	936	46
Ludi	759	747	1506	45	2	7	22	1506	45
Chetian	289	285	574	28	3	3	9	574	28
Longshan	357	351	708	35	4	4	10	708	35
Tian'e	435	429	864	17	3	4	13	864	17
Total	3076	3028	6104	246	20	32	94	6104	246

Note: persons below poverty line from City Civil Administration Bureau. Estimate of beneficiaries below poverty line from District Water Resources Bureau and all the village committees.

Table 3: Investigation of basic conditions of population

Village	Total population	Per capita income (CNY)	Beneficial population	Beneficiaries below the poverty line	Proportion %	women	Proportion %	Ethnic minority population	Proportion %
Gairong	1516	1922	1516	75	4.95	752	49.60	652	43.01
Huajie	936	2293	936	46	4.91	464	49.57	94	10.04
Ludi	1506	2083	1506	45	2.99	747	49.60	392	26.03
Chetian	574	1397	574	28	4.88	285	49.65	144	25.09
Longshan	708	1869	708	35	4.94	351	49.58	212	29.94
Tian'e	864	2015	864	17	1.97	429	49.65	346	40.05
Total	6104		6104	246	4.03	3028	49.61	1840	30.14

Note: Beneficiaries below poverty line from the Huaxi District Water Resources Bureau and all the village committees.

25. Socioeconomic Characteristics of Ethnic Minority Concentrated Communities

In the subproject area, there is one ethnic minority village that is Chetian village in Huchao Bouyei and Miao Autonomous Township. The socio-economic profile in Chetian village would demonstrate the social and economic conditions of concentrated ethnic minority community.

26. There are 574 people in the village consisting of 289 male and 285 female with 25 % of ethnic minority people. The per capita income is CNY 1,397, about 30% lower than the average in the subproject area, while the rural poor is 28, about 5% of the total rural population, same as the average in the subproject area.

2.3 Government Activities for Ethnic Minority Development in the Subproject Area

27. Table 4 summarizes the main government activities implemented to support social and economic development in the project area, including specific programs implemented by the Bureau of Ethnic Minorities and Religious Affairs.

28. These government activities will be implemented by different sectors in the targeted area pre-determined in the five-year-plan. Budget for these activities are pre-determined for each and every year. In other words, there is hardly any flexible money available for additional activities imposed by such project like this ADB financed water integrated management project. The programs are formulated based on the needs of local governments through bottom-up and top-down approaches. These programs, including the provisions of social infrastructures (health clinic, school and market), economic infrastructures improvement (rural road and water supply), public service (health care and education) and capacity building (training on farming and other income-generating activities), will be carried out in the subproject area under the five-year-plan in Guiyang Municipal.

29. Although the Huaxi District is not an autonomous region, there are 7 autonomous townships in the district, over 1/3 (7/18) autonomous townships in Guiyang Municipal, and one of the autonomous townships is located within the subproject area. Additional support, especially specific minority development oriented support will be provided from all sectors of higher-level governments to Huaxi District. These government activities, especially those to be implemented by the Bureau of Ethnic Minorities and Religious Affairs will aimed at ethnic minority people, to improve their social and economic conditions.

**Table 4: Ethnic Minority Development Programs in Huaxi District
(2007-2010)**

Programs	Target/indicators	Budget ('000CNY)	Implementation Agencies	Timing
Agriculture Development Plan	(1) Readjusting the agricultural pattern, (2) Reforming the low-yield farmland, (3) training programs on the plantation and livestock breeding, etc	210,000	Agricultural Bureau, BEMA & Township Governments	2006-2010
Tourism Development Plan	(1) Providing tourist information on the website (2) Developing 3-5 tourist locations with minority programs	300,000	Tourist Bureau, BEMA & Township Governments	2006-2010
Rural infrastructure – electricity, road, and water	(1) All earth village road hardened with pavement or sand/gravel, and (2) 80% of farmland being irrigated	2,000,000	Communications Bureau, Water Resources Bureau, Agricultural Bureau, BEMA & Township governments	2006-2010
Minority Health	(1) 80% of farmers have Rural	250,000	Public Health Care	2006-

Programs	Target/indicators	Budget ('000CNY)	Implementation Agencies	Timing
Care Assistance	Cooperative Medical Insurance (2) all villages have a clinic equipped with 2-3 doctor/nurses.		Bureau, BEMA & Township governments	2010
Rural Education Support	(1) Improving the facilities of schools in rural area, (2) increasing children's average education to 8-year, (3) providing training program for adults, esp. remote training program	320,000	Education Bureau, BEMA & Township governments	2006-2010
Market establishment	(1) Distribution of market information on the website, (2) establishing and improving 2-3 markets in the ethnic minority townships	250,000	Development and Reform Committee, BEMA & Township governments	2006-2010
Total		3,330,000		

Source: Huaxi BEMA (2006)

2.4 Local Social Organization and Stakeholder Analysis

30. The primary stakeholders for this project are the farmers, 30% of them being ethnic minority people in the subproject area. Secondary stakeholders include the Water Resources Bureau and governments at township and village levels. Generally speaking, the farmers in the subproject area are impacted by some unfavorable factors and will gain benefits. Public participatory consultation and focused group discussion by gender found that the water and soil conservation project is a beneficial project for future development. The local villagers expressed their support to the subproject and desire of the program of 'transforming hillside farmland into terrace', which will increase their income and water and soil conservation. According to the analysis of similar projects, they will increase economic income by CNY 200-300 per person per year as a result of the project.

31. As for the governments at various levels, their objective is to enrich the locality. The construction of this project will strengthen agricultural infrastructure, which can help guarantee increased agricultural yield and income. The project owner is Huaxi Water Resources Bureau which is the department authorized to administer water on behalf of the government. Its management objective is should follow that of the government. The project itself has a certain promotional role for local economy, which will drive the development of building material and service sectors, in keeping with the development purpose of owner and township/village governments. In addition, the design institute will gain benefit from doing the design work. In short, all different stakeholders welcome the construction of this project.

Table 5: Summary Stakeholder Analysis for Subproject

	Primary/ Secondary	Issues concerned or involvement with the project
Farmers of Gairong, Huajie, Ludi, Chetian, Longshan and Tian'e Villages	PS	Impacts of potential construction, resettlement, land acquisition, etc. and improvement of farming conditions
Management office of Huaxi Reservoir	PS	Improvement of water quality, and upstream management of water resources
Shiban Town, Dangwu and Huchao Township Governments	SS	Arrangements and management in construction and operation phases
Committees of 6 Villages	SS	Arrangements and management in construction and operation phases
Asian Development Bank	SS	Loan, performance and sustainability of the project
Water Bureau	SS	Executive Agencies, construction management, operation and maintenance

	Primary/ Secondary	Issues concerned or involvement with the project
Development and Reform Committee	SS	Sector planning
Finance Bureau	SS	Financial support and guarantee
Environmental Protection Bureau	SS	Environmental monitoring, management & supervision
Land and Resources Bureau	SS	Land acquisition review and approval
Agriculture Bureau	SS	Farming structure adjustment
Bureau of Civil Affairs	SS	Resettlement, minority, poverty, etc.
Center for Disease Control and Prevention	SS	Prevention and control of water-caused diseases, protection of public health
Deputies to the People's Congress	SS	Issues on socioeconomic development and people's livelihood

2.5 Cultural Beliefs

32. Miao people in the project area have nearly all the distinctive characteristics of Miao Minority in China. The Miao Ethnic Minority has its own language with various dialects and without written words. Almost all Miao people can understand Miao language, GM dialect of Chinese and Mandarin. In daily communication among local Miao People, GM dialect of Chinese is normally used, while Miao Language is mainly used in communication by elder Miao people or on some intimate or particular occasions. Most of the local Miao people can speak GM dialect of Chinese, while some teenagers can not speak Miao Language (most Miao people over 20 can speak Miao language).

33. They celebrate special festivals of their own during the year. Local Miao People share similar holidays and celebrations with Miao People in other parts of Guizhou, mainly including celebrations such as April 8th, March 3rd and June 6th. On these holidays, performances as singing and dancing are organized for celebration. However, these activities are declining.

34. In daily life, local Miao people wear clothes similar to the Han People. Some people, especially women, wear distinctive ethnic clothing, at least on some occasions. In the subproject area, most agricultural and other livelihood activities are very similar for ethnic minorities and ethnic Han people.

2.6 Territory

35. Land use rights are specified in thirty-year contracts. Land allocations were calculated based on the number of people in the household, and all of whom are listed on the contract for land use rights. The farmland was equally and evenly contracted to the villagers, including ethnic minority people, while the forest land collectively owned by the village was contracted to the interested farmers within the village by competitive bidding. The contract period of forest land is 50 years. The economic income, i.e., the contracted price paid by the contracted farmer for the use rights of the community forest land in the contracted period, was shared by all the villagers, including ethnic minority people. Table 6 shows common land held by each of the villages in the project area.

Table 6: Village Land Holdings

Village	EM Population	Household contract land (ha)	Community facilities (roads, schools, etc.) (ha)	Community forest (ha)
Gairong	652 (43.01%)	105.66	272.16	45.36
Huajie	94 (10.04%)	103.27	240.3	39.87
Ludi	392 (26.03%)	127.8	834.7	138.9
Chetian	144 (25.09%)	68.63	120.72	20.12
Longshan	212 (29.94%)	76	130.08	21.68
Tian'e	346 (40.05%)	66.6	89.9	13.7

2.7 Resource Use Patterns

36. Lowland areas are used for cultivation of field crops, rapeseed followed by rice where sufficient water is available. Some sloping land is terraced and some is planted with fruit trees.

Table 7: Current Agricultural Land Use Patterns

Village	EM Population	Lowland (ha)		Upland fields (ha)		Orchard (fruit) (ha)
		Rice	Rapeseed	Corn	Wheat	
Gairong	652 (43.01%)	21.60	2.16	70.44	35.22	6.80
Huajie	94 (10.04%)	22.08	2.21	65.22	32.61	13.40
Ludi	392 (26.03%)	18.75	1.87	85.20	42.60	6.50
Chetian	144 (25.09%)	10.08	1.01	45.76	22.88	3.33
Longshan	212 (29.94%)	16.00	1.60	48.00	24.00	6.67
Tian'e	346 (40.05%)	12.80	1.28	44.40	22.20	0
Total	1840(30.14%)	101.31	10.13	359.02	179.51	36.70

3. SUBPROJECT IMPACTS ON ETHNIC MINORITIES

37. As there is no land acquisition and resettlement for the subproject, the minor negative impacts might come from loss of standing crops and the income loss in the short period of construction of transformation of hillside farmland into terrace. The standing crops will be compensated at the replacement value, while the construction will be carried out as much as possible on the non-farming seasons.

38. Compared with the minor negative impacts, there are several positive impacts on the local people, including the ethnic minorities.

39. The transformation of hillside farmland into terrace will be undertaken on 230.6ha area among 4 villages, of which, 46.7 ha in Gairong village, 75.1 ha in Huajie village, 63.2 ha in Longshan and 45.6 ha in Tian'e village. The statistics of the beneficiaries from the villages indicates that 2,571 people, including 413 ethnic minority people will benefit from the improvement of production conditions, and adjustment of agricultural production pattern. The estimated income increase of CNY 642,750 is to be obtained by the beneficiaries in the project area, so as to improve their livelihood.

40. Economic /fruit trees will be planted on an area of 114.49 ha with 2,350 beneficiaries, including 478 ethnic minority people from estimation of annual income increase by CNY 94,000.

41. Water and soil conservation forest or grass plantation and other measures of forest protection will improve the ecological environment so to benefit the economy.

Table 8: Ethnic Minority Beneficiaries

	Area (mu)	Beneficiaries total	Male	Female	EM total	Male	Female
Gairong	N.A	1516	764	752	652	391	261
Huajie	N.A	936	472	464	94	47	47
Ludi	N.A	1506	759	747	392	214	178
Chetian	N.A	574	289	285	144	79	65
Longshan	N.A	708	357	351	212	106	106
Tian'e	N.A	864	435	429	346	196	150
Total	88.5	6104	3076	3028	1840	1033	807

4. PARTICIPATION PROCESS AND RESULTS

4.1 Consultation during subproject preparation

42. Table 9 shows the public consultation activities carried out at the site, including two meetings of public participatory consultation in April and June respectively, and one focused group discussion by gender in May. In addition to this information, consultation has occurred more informally as part of field walkthroughs for project options, environmental impact assessment, and other activities. At the first meeting, two out of nineteen participants were Miao ethnic minorities, and the second meeting, two out of twenty-three participants were Miao ethnic minorities. For the focused group discussion, 8 out of 20 participants were female, two were Miao ethnic minority people. Though there are not many ethnic minority people participating the public consultation meetings, their concerns and needs are consulted by the representatives from the ethnic minority people and by informal meetings. During further subproject preparation additional consultation, additional consultation will be carried out, including consultation focused specifically on ethnic minorities, to ensure their views are fully considered during further project design and implementation.

Table 9: Public Consultation Activities

Type of consultation	Date	Location	Participants Total	Male	Female	EM
1 st Public Participatory Consultation	April 6, 2006	Ludi village, Shibantown Huaxi District	19	16	3	2 Miao
Key Informant Interview	May 18, 2006	School of Humanities, Guizhou University	3	3	0	Research Institutes on Ethnic Groups
Key Informant Interview	May 18, 2006	Guiyang Water Resource Bureau	6	4	2	Guiyang Water Conservancy Association
Focused Group Discussion by Gender	May 22, 2006	Huajie village, Shibantown Huaxi District	20	12	8	2 Miao
2 nd Public Participatory Consultation	2006-5-22	Huajie village, Shibantown Huaxi District	23	12	11	2 Miao

4.2 Aspirations, needs, and preferred options

43. Consulted from the formal and informal activities for the EMDP, the overall conclusion from public consultation is that the needs and aspirations of ethnic minorities in the project area are the same as their Han neighbors. They want improved agricultural production

conditions by transforming the farmland for conservation of water, soil and fertility. They want better living conditions by preventing water and soil erosion. They want to readjust agricultural production pattern by developing economic/fruit tree plantation, economic crops such as Chinese herbs, and livestock breeding, so as to improve the household income and livelihood in the implementation of program 'returning farmland to forest'. They want to be fully included in project activities and are similarly interested in participating in construction activities.

44. In addition, when the production and ecological environment improved by the subproject, development of economic/fruit tree is expected by the ethnic minority groups by promoting the rural tourism, attracting urban residents to spend their holidays in the garden by enjoying rural scenery and picking fresh fruit from trees by themselves.

5. ACTION PLAN

45. The Project will apply a strategy to ensure full participation of ethnic minority people and ensure that the ethnic minority people are better off after the project. Table 10 presents the main ways in which the project will have impacts on ethnic minority people, targets, number of ethnic minority people affected, budget information, and timing.

Table 10: EMDP Action Plan

Measures	Targets/Indicators	Ethnic Minority People Beneficiaries /Affected Persons	Budget	Timing
Terracing, soil conservation on sloping land	Full inclusion of ethnic minorities	1496 persons	In project budget	2007-2008
Construction employment	Local labor 50%, with proportionate inclusion of ethnic minorities	18,750 labor days, 180 person months; 105 persons	In civil works contracts	2007-2008
Communicable disease control	Clinic services for construction camps and communities Health education in project area villages	105 laborers 6104 residents	In project budget and government budget	2007-2008
Agricultural extension	Full inclusion of ethnic minorities	500 persons trained 6 demonstration sites	Local government	2006-2010

5.1 Measures to avoid, mitigate, or compensate for the adverse project effects;

46. *Labor safety and hygiene.* Public health education and service outreach will be provided to prevent negative impacts for construction skilled workers mostly from outsiders and unskilled workers from the local people, and neighboring communities from communicable diseases including HIV/AIDS. In light of construction requirement for the project, technically feasible and economically practical safety and protection facilities shall be designed to prevent from occurrence of safety accident and occupational injury and to ensure life and property safety and designing principle shall conform to national and industrial laws and rules as follows:

- (1) Safety production law of PRC (November 1, 2002);
- (2) Labor Law of PRC (January 1, 1995);

- (3) Occupational disease protection and cure law of PRC (May 1, 2002); and
- (4) Fire prevention law of PRC (September 1, 1998)

47. The construction companies should have an investigation of the communicable disease situation among the construction personnel before they enter the site, which should be documented. Construction personnel should receive sampling health examination regularly and annually at construction stage, the number of which is reached by 10% of the number of persons investigated and put on file. Each construction company should clearly appoint the responsible person for sanitation & epidemic prevention who are supposed to manage according to the epidemic situation control and report system promulgated by local disease control authority, and to accept the supervision by sanitation and disease control authorities. Medicines and apparatuses for the treatment of common communicable diseases should be provided up in various divisions and medicines for preventing communicable diseases should be provided to protect public health.

48. Construction arrangement: construction activities of the proposed subproject will be arranged in the slack season of agricultural production, so to reduce the impacts on farmer's income as much as possible.

49. Laying embargo of farming and cutting: Consulted with the locals, forest will be protected by issuing a shifting embargo, i.e. a rotation in the restricted area. Prior to issuing the embargo of farming and cutting, an open area for grazing and fuel-cutting will be determined to meet the requirements by the daily life and production of people living in the forest protection zone, while the other forest area will be forbidden to any production activities. 2-4 years later, the vegetation within the area with an embargo will be restored and shifted as an open area for grazing and fuel cutting, and the open area will be embargoed. This kind of arrangement is accepted by the villagers, including ethnic minority people, and will have no adverse impacts on their life and production.

5.2 Measures to ensure project benefits will accrue to indigenous peoples

50. The primary strategy of project preparation is to ensure project benefits accruing to the ethnic minority people. Beneficiaries are participating in planning for water and soil conservation, including preparation for future operation and maintenance. Preference of temporary employment will be given for local labor during construction, including women and men, with inclusion of ethnic minorities in appropriate proportion to their presence in the local population. Related clauses of priority of temporary employment could be included in the civil works contract for the local people.

51. Integrated planning for multi-purpose management will provide a means to assure input from stakeholders and consideration of their interests in fair redistribution of farmland among them and balancing water allocation for agricultural irrigation. All villages, including the Chetian Ethnic Minority Village, should be represented in the stakeholder panel established to provide stakeholder input on planning for multipurpose reservoir operation.

5.3 Measures to strengthen social, legal, and technical capabilities of government institutions to address indigenous peoples issues

52. The Huaxi County Water Resources Bureau will be the Implementing Agency for this subproject, which will be supported by the related township level officials. An interagency task force to carry out field activities will include staff from the Bureau of Ethnic Minority and Religious Affairs.

53. Some relevant capacity already exists in the Bureau of the Ethnic Minorities and Religious Affairs at the Municipal, County and Township levels. They will be involved in

planning and implementation project activities, including coordination of relevant activities done using their own resources.

54. Training will be provided by the relevant local agencies to develop capacity for all aspects of project implementation, especially on the social development to ensure full participation of ethnic minorities in the project and equitable treatment of the farmland resources. The Guiyang Municipal Bureau of Ethnic Minority and Religious Affairs will provide oversight and support.

55. The Municipal Bureau of Ethnic Minority and Religious Affairs and equivalent bureaus and staff at lower levels of government will carry out activities to promote the welfare of ethnic minorities.

5.4 Involvement of local organizations and non-governmental organizations with expertise in indigenous peoples issues

56. The Ethnic Minorities and Religious Affairs Bureau for Huaxi County will be part of the Project Implementing Office. Relevant experts from the Guizhou Nationalities Institute may take part in the annual review of ethnic minorities development in the project and may be asked to advise if specific needs are identified.

5.5 Implementation Schedule

57. The implementation schedule for the subproject is presented in Figure 2.

6. BUDGET ALLOCATION

58. The budget sources for activities in this EMDP are shown above in the EMDP Action Plan in Table 12. Funding will be provided as part of the project budget, including civil works, and the resettlement action plan for the subproject. Related activities by the Ethnic Minorities and Religious Affairs Bureau in the Project Area were discussed above and shown in Table 6 on Related Government Activities for Ethnic Minority Development.

7. MONITORING AND EVALUATION

59. It is necessary to carry out monitoring and evaluation of the implementation on the EMDP to ensure the plan could be implemented to meet the determined target. The Implementing Agency shall be the primary responsible for the monitoring and evaluation, with support from the Bureau of Ethnic Minorities and Religious Affairs and from independent local experts. The local experts used for monitoring might be the same as that entrusted for the external monitoring and evaluation of resettlement or overall project.

60. The monitoring and evaluation plan shall include:

- Baseline survey to collect information of key indicators for monitoring and evaluation;
- Preparation of semiannual reports on progress in implementing the EMDP and updating the information; and
- An annual review of EMDP implementation that will compile and analyze relevant information and prepare recommendations for enhancing impacts.

61. The semiannual progress reports will be prepared and submitted to ADB by PMO every six months, and the annual external monitoring and evaluation report of EMDP

implementation will be submitted to ADB annually by the entrusted external monitoring agency.

62. The budget for monitoring and evaluation activities will be listed in the project construction investment

63. Table 11 summarizes the affected ethnic minority and beneficiary of ethnic minority by each component of the subproject. The data shows that the affected people are the also the beneficiaries, there are no difference between the people to be affected and benefited.

Table 11: Summary of Affected Ethnic Minorities and Beneficiary

	EM Affected	Total population affected	EM Beneficiary	Total Beneficiary	EM Affected/ Total population affected	EM Beneficiary/ Total Beneficiary
Water conservancy forest or grass plantation	981	4,753	981	4,753	20.64	20.64
Economic/fruit Tree Plantation	478	2,350	478	2,350	20.34	20.34
Forest protection by issuing embargo	765	4,960	765	4,960	15.42	15.42
Transformation of hillside farmland of terraces	413	2,571	413	2,571	16.06	16.06

Annex 1: Records of Public Consultation Symposium**First Round of Public Consultation**

Title	Public Consultation on Huaxi Reservoir Comprehensive Rehabilitation Project for Water and Soil conservation in Small Watershed (From Huajie to Chetian)
Time	6th, April, 2006
Venue	Ludi Village, Shibao Township, Huaxi District
Participating government agencies and their representatives	16 representatives from Water Resource Bureau of Huaxi District, Forestry and Landscaping Bureau of Huaxi District, Civil Affairs Bureau of Huaxi District, Financial Bureau of Huaxi District, Construction Bureau of Huaxi District, Land Resource Bureau of Huaxi District, Agricultural Bureau of Huaxi District, Ethnic and Religious Affairs Bureau of Huaxi District, Tourism Bureau of Huaxi District, Environment Protection Bureau of Huaxi District, Agricultural Affairs Office of Huaxi District, The People's Government of Dangwu Township, The People's Government of Shibao Township and The People's Government of Huchao Township attended the consultation respectively, among whom 4 representatives are female. (see attachment for detailed name list)
Representatives from Villages involved in the Project	19 representatives from Chentian Village of Huchao Township, Longshan Village of Dangwu Township, Tian'e Village, Gaikang Village of Shibao Township, Huajia Village of Shibao Township and Ludi Village of Shibao Township attended the consultation, among whom 3 representatives are female and 2 representatives are from ethnic groups.
PPTA personnel	Bryan, Zhoushan, Jianggongliang, Xuyinxin, Nie Danping, Luozhen
PMO	Panlin, Zhangbin
Host	Panlin, Director of the Planning Department of Guiyang Water Resources Bureau
Recorded by	Luo Zheng
Procedures/proceeding	Item
I	Mr. Panling introduced the general purpose for public consultation
II	Mr. Hutonghua as the Deputy Director General of Huaxi District Water Resources Bureau gave a brief introduction to the Project
III	Mr. Bryan gave a survey of the project and invited the participants to present more opinions and suggestions.
IV	Group Discussion (Recorded by the participants themselves, the following records are mostly direct quotations from group discussions.)
V	Summary and Readout of Group Discussion Results
Group 1	<p>(1) Representative Mr. Daiyonghong: He expressed the gratitude to ADB for the benefits from "Transformation of Hillside into Terrace Fields" Program, which will lead to high crop yield. It will be appreciated if the government could increase financial commitment to finance more similar programs. We are committed to the long term proper management of constructed aqueduct.</p> <p>(2) Representative Mr. Luojiangtang: It is the public opinion to be committed to water conservation endeavors, which would benefit the farmers and their farm production. As local farmland elevation is well above water source levels, it is difficult to obtain irrigation water and 90% of farm production depends on water</p>

- transmitted via aqueducts, which should be charged. With water conservation programs, the structure of local agriculture industry will be well adjusted so that farmers could have a steady farm output and increased revenues. And a majority of the public is committed to the well-being of these programs and facilities.
- (3) Representative Mr. Wu: Local farmers need the water and soil conservation rehabilitation program badly. As for the plantation of cash crops/fruits, quality breed/strain that can generate more profits should be selected. More investments should be made in water conservancy projects. It is expected that the rehabilitation of outdated pump station built in 70s will benefit the farmers. Based on local conditions, farmers should play an active role in the management and construction process.
 - (4) Representative Ms. Luo Jingyun: Flood channel should be constructed properly. And a more desirable model for dam construction should be developed so that every individual would like to get involved in and benefit from construction.
 - (5) Representative Mr. Lei: Soil erosion is a serious problem. We have realized the importance of this project. We hope that the tractor road may be 2-3 meters wide. If possible, village tourism shall be promoted. As to facility management, relevant authorities and the village committees should take their responsibilities. When economic fruit trees are distributed to villagers, follow-up management will be necessary. As to the irrigation, we need to upgrade pump stations as well as pumps.
 - (6) Representative Mr. Wu: We must pay high attention to management, which is also our practice in managing agricultural production.
 - (7) After hillside fields are transformed into terraced farms, is it possible to construct certain small water pools or add more pumps on the highland to resist potential draughts?
 - (8) Representative Mr. Wu: Water and soil erosion is big terror to farmers; that is why we support the water and soil conservation projects.
 - (9) Representative Mr. He: How to improve the soil quality along the Huaxi River since soil erosion in recent years becomes quite serious? I think irrigation ducts and flood channels are most urgent issues. How to group the sparse farmland is also very important. I think that farmers shall be informed the benefit of this change, which must be under the control of the villagers. After the transformation from hillside fields into terraced farms is completed and small water pools are constructed, what kind of prevention measures shall be provided against injuries and casualties? Is it possible for villages to form a joint association to deal with the issue? Besides, if marketing of economic fruit trees means better sale, why not let us do it jointly?
 - (10) Small water pools are suggested to be well protected after they are constructed.

Group 2

- (1) Representative Mr. Wu: The transformation project will improve the produce of our village. It is easy for us to build small water pools. But biogas generating pits are relatively difficult to construct.
- (2) Representative Mr. Wu from Ludi Village: So far the water level is much lower than the elevation of farmland. We have stone aqueduct which is 3-4 km long, whose functions we expect will be improved. As to water and soil conservation, we hope the terraced farms will have better soil depth. Also we hope that tractor roads will be constructed on the terraced project and water pools built where irrigation is unavailable. Our village will go all out for the project.
- (3) Representative Mr. Huang from Ludi Village (Miao minority): The transformation from hillside fields into terraced farms shall be carried out with greater enthusiasm.
- (4) Representative Mr. Luo from Gaiyong Village: Aqueduct construction must be emphasized. We also wish you may take into consideration building tractor roads

<p>on the terraced farms.</p> <p>(5) Representative Mr. Luo from Huajie Village: Presently we have 3 pump stations that are too old to be upgraded safely and an aqueduct that has many leaks. So we hope to lay a solid foundation for the tertiary industry.</p> <p>(6) Representatives from Tian'e Village: Our village is quite near to Huaxi river, so we would like to cultivate economic fruit trees, and will be glad if you plant trees along the river and improve the traffic capacity of tractor roads or others.</p> <p>(7) Representative Mr. Wu from Longshan Village: Building biogas generating pits is too difficult for us, so we hope the relevant authorities may help us financially. Also the current pump stations can hardly meet the irrigation needs, so we wonder if you may provide us two more pumps for agricultural purpose?</p> <p>(8) Representative Mr. Lei from Chetian Village: It is a good opportunity to adjust some farmland into economic fruit woods. As to the traffic, tractor roads shall be built more or upgraded. Soil conservation and quality is very important in transforming hillside fields into terraced farms. There is still more to be done since the current 2.5 km aqueduct in our village is too primitive to provide normal irrigation.</p> <p>(9) Representative Ms. Luo from Ludi Village: So far the transformation of my family's field into terraced farm has been completed. So is the biogas generating pit that may save CNY 500 worth of coal annually. It is really beneficial, so please do it more strenuously.</p> <p>(10) Irrigation management is a big problem. In some villages, the irrigation cost is too high.</p> <p>(11) During the transformation of hillside fields into terraced farms, local farmers shall be given priority to get the employment so as to increase their income. As to the land adjustment, the village committees should negotiate with villagers.</p> <p>(12) Summary: the following are the viewpoints of the villages involved: First, the project of transforming hillside fields into terraced farms shall be give due emphasis to improve agricultural production; on the same time, tractor roads should be built or upgraded. Second, during the project construction, local farmers shall be employed whenever possible. Third, investment in aqueduct irrigation shall be increased (pump stations and irrigation ducts included) to improve irrigation efficiency and lower the cost; small water pools should be built where irrigation is unavailable. Fourth, it is hard to construct biogas generating pits in the village, and it is expected that related authorities may provide financial or material help.</p>
<p>3. Government Agencies as a Discussion Group</p> <p>(1) Financial Bureau: We will carry out the financial management policies of ADB; provide sound follow-up management; and cultivate self-management of farmers.</p> <p>(2) Agricultural Affairs Office: We will make full use of farmers' initiative; combine the cultivation of economic fruit woods with village tourism; provide sound follow-up management; encourage villagers' autonomy; and provide post-project training.</p> <p>(3) Environment Protection Bureau: We will popularize new technologies (including training and visits). We propose to put follow-up management of the project into project expenditure. We will produce an EPA report.</p> <p>(4) Agricultural Bureau: We suggest to list industrial structure readjustment fund into project expenditure, and economic fruit trees cultivation, village tourism, and husbandry shall be encouraged.</p> <p>(5) Forestry and Landscaping Bureau: The integration of subprojects as well as the interagency cooperation should be enhanced. Project's construction quality must be emphasized. Land use during implementation phase shall be well planned, and coordination, publicity, and notification (mainly to the farmers) should be done strenuously.</p> <p>(6) Tourism Bureau: We plan to develop the local tourism in the project area via the construction of the project.</p>

(7)	Ethnic and Religious Affairs Bureau: It is important to take into full consideration the development of ethnic groups.
(8)	Huchao Township: We will provide more and better training; set higher standard for construction supervision; propose to list the follow-up management fee into project expenditure; increase the percentage of economic fruit trees; combine the water-conservation forestry with tourism; guarantee a long-term function of water-conservation infrastructures; and improve interagency cooperation with an integrated use of all resources.
VI Answers to some issues during group discussions	
Mr. Wu Tonghen:	
(1)	As to whether the project loan shall be paid by the farmers or not, the answer is negative; the government will pay back the loan.
(2)	As to the compensation for the transformation of hillside fields into terraced farms, only growing crops will be compensated.
VII Other Opinions solicited from group discussion:	
(1)	Existing pump stations in some villages have been contracted to individuals. High electric charges result in a high irrigation water charge at 15Yuan/Hour.
(2)	Irrigation water(via lifting water) charge should be calculated in a comprehensive way on the basis of electric charge, wear and tear of equipment, man power and so on.
(3)	The pump station in Longshan Village is currently administered by the Village Committee, which is responsible for formulating relevant regulations. The irrigation water(via lifting water) charge at 12 Yuan/Hour includes electric charge, maintenance cost and salary cost
(4)	The management of pump stations should be adapted to local circumstances, including collective management by the village committee and private operation by individuals via contract.
(5)	When pump stations are contracted to individuals, the contractors should deposit a certain amount of security deposit to guarantee regular operation.
(6)	In the transformation of hillside into terrace fields, different farming households could be involved. It is up to the farming households involved to negotiate land adjustment terms voluntarily. The village committee as an arbitrator may solve the difficult problems arising from the process. .
(7)	The local entities should be eligible for contract work in construction.
(8)	It is expected to start and complete the project as soon as possible. The villagers as well as village authorities are willing to give full support to the project and help to solve relevant problems encountered.
(9)	A reasonable sum of securities should be deposited when pump stations are contracted to individuals.
VIII Summary of Opinions Solicited from Public Consultation	
(1)	Generally speaking, the public have realized the importance of improved ecological environment and cultivating conditions to the well-being of their life and production and hold a welcoming and supportive attitude toward the project.
(2)	All the village cadres participating into the consultation have expressed their full support for the coordination and management efforts among others during project implementation process.
(3)	It is expected that the public programs such as Transformation of Hillside into Terrace Fields, Plantation of Cash Crops/Fruits & water-reservation forest and Construction of little water cellars, aqueduct, pump stations and biogas generating pit can be carried out. It is also anticipated that fund could be provided to fix up existing water resource facilities and that improvements to local production and transportation conditions such as the building of tractor roads could be made.
(4)	Generally speaking, the farmland in project area is above natural water levels. As existing irrigation facilities are obsolete and worn out, they cannot meet existing

- irrigation demand. Moreover, their operation costs are high.
- (5) It is agreed that the public and the village committees have the obligation of managing and maintaining water resource facilities properly in order to make them work better for public well-being.
 - (6) It is anticipated that more government capital injections could be made on public programs such as cash crops/fruits plantation, tractor road renovation, the construction of little pond and water cellar, biogas generating pit, etc.
 - (7) It is proposed by some representatives that relevant associations could be set up to facilitate participation into facility management.
 - (8) Based on local practical conditions, pump (for irrigation) stations should take appropriate management measures to avoid inflated irrigation water charges. If pump stations are contracted to individuals while still owned by the village collectively, the contractor should deposit a certain amount of security deposit or risk deposit to guarantee the normal operation of facilities.
 - (9) It is agreed by representatives from relevant local government agencies that the development of ethnic minorities should be incorporated into the project plan, that respective government agencies should coordinate their efforts well in implementation process, that technology transfer and training programs should be well conducted, that project engineering quality should be perfected, that following maintenance and management should be well done, that local tourism should be developed and that self-management-and-maintenance by farming households should be encouraged and supported.

Minutes of the Meeting with Research Institutes on Ethnic Groups

Time: 9: 30-10: 45 Am, 18 th , May, 2006
Venue: School of Humanities, Guizhou University
PPTA Participants: Miss Xu Yinxin and Mr. Luo Zhen
PMO Participants: Ms Xu Ping and Mr. Kong Lingshen
Experts Participants from the Institute: <ol style="list-style-type: none"> 1. Wang Liangfan, Professor, Director of Research Institute of Minority Languages and Cultures in Southwestern China at Guizhou University 2. Liu Feng, Associate research fellow and PhD in anthropology, Director of Research Institute of Anthropology at Guizhou University 3. Cao Duanbo, Associate professor and PhD in anthropology, from the School of Humanities at Guizhou University
Meeting Minutes: <ol style="list-style-type: none"> 1. Shallow plowing is normally practiced by minorities in relatively meager areas. Different cropping patterns are adopted by different minorities in different area with different ecological conditions. 2. Throughout GM, ethnic minorities share with the Han People basically the same customs and lifestyles in many respects, with a relatively high degree of integration. 3. Project implementation shall satisfy ethnic minorities living in project areas. In some areas, some ethnic minorities are relatively converged via villages as the basic unit, probably featuring clanship. 4. In case that land belonging to ethnic minorities is seized or their housing is expropriated, consultation should be held with local people, with respect paid to their religions and beliefs. Their cultural and psychological recognition shall be obtained in the event of relocation or land acquisition.

5. Interaction within communities can be adopted to encourage the involvement of ethnic minorities into the project so that they can be informed of project composition & prospect and their endorsement and recognition can be obtained in terms of building construction features.
6. In areas where ethnic minorities live together, Sheikhs with authority exist in some areas so that the consultation with them can facilitate the solution of problems arising.
7. Project Implementation brings about opportunities to ethnic minorities, such as improvement to housing, transportation, among other infrastructures.
8. Traditions and customs of ethnic minorities shall be respected during mass relocation, for example, some ethnic minorities may prioritize “Fengshui” in building construction.
9. Land acquisition may intensify the shortage of land per capita and negatively affect life and production of ethnic minorities. Relevant mitigation measures shall be taken to achieve “sustainable development” in their life and production.
10. Compensation in cash alone can not solve fundamental problems in land acquisition and resettlement. Due attention should be paid to their living & production conditions and customs so as to preserve their cultural integrity as much as possible.
11. Project implementation shall benefit the ethnic minorities in terms of production and life through “localized” resettlement in accordance with their customs.

Summary:

With relatively a high degree of integration, throughout Guiyang Municipality, ethnic minorities share basically the same lifestyle, production mode, and customs with neighboring Han People. Project Implementation may bring about opportunities to ethnic minorities, such as improvement to housing, transportation, among other infrastructures. In case that land belonging to ethnic minorities is seized or their housing is expropriated, consultation should be held with local people, with respect paid to their religions and beliefs, so that their cultural and psychological recognition could be obtained. Through the involvement of ethnic minorities into the project so that they can be informed of project composition & prospect, project implementation shall benefit the ethnic minorities in terms of life and production.

Minutes of the Meeting with Guiyang Water Conservancy Association

Time: 3: 00-4: 00 Pm, 18 th , May, 2006
Venue: Guiyang Water Resource Bureau
Participants from PPTA into the Meeting: Miss Xu Yinxin and Mr. Luo Zhen
Participants from PMO into the Meeting: Ms. Xu Ping and Mr. Kong lingshen
Experts Participating into the Meeting: 6 members from Guiyang Water Conservancy Association Mr. Zhang Bin, Mr. Li Guihua, Ms. Song Rui, Mr. Mo Jiang, Ms. Chen Xiaodan and Mr. Zhou Hangping
Meeting Minutes: <ol style="list-style-type: none"> 1. Water conservancy project is beneficial to the improvement in living and production conditions of farmers and ethnic minorities. 2. Water conservancy project will alleviate poverty through improvement in living and production conditions such as irrigation and water supply. Ethnic minorities in project area shall benefit equally from the Project.

3. Completion of water conservancy project shall be beneficial to living and production conditions of women and ethnic minorities in project area, for example, improvement in irrigation can reduce manpower invested in irrigation draft and farming and improve yield.
4. Throughout Guiyang Municipality, ethnic minorities share with the Han People basically similar customs and lifestyles in many respects, with a relatively high degree of integration.
5. In rural areas of Guiyang, equality of men and women is practiced with women participating into farming. As a result, improvement in irrigation shall be beneficial to the reduction of women's labor intensity.
6. In preparatory period of the project, opinions and suggestions from ethnic minorities, women and households benefiting from irrigation draft shall be solicited as much as possible. During project operation, households benefiting from the project shall be mobilized to participate into simple maintenance work etc.
7. Public opinions shall be solicited on canal route selection, for example, the implementation of water and soil conservation project shall be allowed to initiate until public approval is obtained in mass rally.
8. There exist many difficulties in establishing a water consumer association to let benefiting households participate into project operation, management and maintenance as a future development. Its establishment depends on physical circumstance in Guiyang and project area, with project scale and category taken into full consideration. Pilot program for the establishment of water consumer association can be launched in areas with proper conditions, with its expansion throughout Guiyang Municipality step by step adjusted to local conditions when practical conditions permit.
9. It can be considered that technical service center for water and soil conservation might be established for water and soil conservation project, with the center in charge of water and soil reservation management and pumping irrigation specifically. Water price shall be set after soliciting public opinions, with water resource management subject to market mechanism.

Summary:

Throughout areas involved in the ADB-financed project in Guiyang Municipality, ethnic minorities share with the Han People basically the same customs and lifestyles in many respects, with a relatively high degree of integration. Completion of water conservancy project shall be beneficial to the improvement in living and production conditions of women and ethnic minorities in project area. Opinions and suggestions from ethnic minorities, women and households benefiting from water access should be solicited as much as possible throughout the project.

There exist many difficulties in establishing a water consumer association, whose establishment depends on physical circumstance in Guiyang and project area, with project scale and category taken into full consideration. Pilot program for its establishment can be launched in areas with proper conditions, with its expansion throughout Guiyang Municipality step by step adjusted to local conditions when practical conditions permit.

Second Public Consultation

Title	Public Consultation on Huaxi Reservoir (From Huajie to Chetian) Small Area Integrated Water & Soil Conservation Project
Time	2: 00-4: 00 PM, 21st, May, 2006
Venue	Huajie Village, Shibao Township, Huaxi District
Participants from Government Departments	Huaxi District Water Resources Bureau, Agricultural Bureau, Agricultural Affairs Office, Forestry Bureau, Environment Protection Agency, Tourism Bureau, Financial Bureau, Civil and Religious Affairs Bureau and Huchao Township Government Office.
Villager participants	23 villager representatives attended the consultation, including 11 female representatives and 2 minority representatives. (detailed name list is attached).
PPTA participants	Miss Xu Yinxin, Mr. Luo Zheng and Miss Nie Danping
PMO participants	Mr. Zhang Bin, Miss Xu Ping and Mr. Kong Ling Shen
Recorded by	Mr. Luo Zheng
Number	Description
I	Mr. Liu Yong from Huaxi District Water Resources Bureau introduced basic information on the project
II	Other personnel from Huaxi District Water Resources Bureau provided supplementary information relevant to the Project
III	Group Discussion
<p>Group 1</p> <ol style="list-style-type: none"> (1) Severe water and soil erosion has brought about many problems and inconvenience to local people with respect to their lives and production, with heavy soil losses on the hill, especially in the rainy season. Local villagers often make voluntary efforts to transform sloping field into terrace field so as to reduce soil erosion. (2) Since 1987, local villagers often make voluntary efforts to transform sloping field into terrace field so as to increase farm yield and reduce soil erosion so that this project will be strongly supported by local people. (3) With inconvenient access to the fields, it is expected that relevant tractor roads and shortcuts could be built to reduce the labor intensity of local people. With improvement on transportation conditions, the development of local tourism can be promoted. With construction of the water and soil conservation project, cropping composition and patterns can be adjusted to increase revenue with conditions of ensuring adequate food supplies. (4) As local water channels are obsolete and in lack of maintenance and repair, it is expected that relevant authorities could support their maintenance and renovation. (5) Most of the local pumping stations have normally been contracted to individuals under the management and supervision of village party committees and the public. Irrigation water price is set on the basis of water tariff with consideration for labor cost and electricity charges. (6) Benefiting households from local aqueducts are responsible for their maintenance with annual labor input into them. (7) The villagers are interested in planting cash crops such as fruit trees. As for the management of water conservation forests, it is suggested that villagers manage them separately if the plots of land have been contracted to individual household. Where collectively-owned land has not been contracted to individual household, it will be managed by designated person by the village committee. And woodland arising from the "returning land for farming to forestry" program will be supervised by designated person. (8) Local villagers will definitely and strongly support the water and soil conservation 	

<p>projects such as plantation of water and soil conservation forest and economic crop and fruit trees with labor input into them. In the implementation of large scale projects, local villagers should be prioritized in consideration.</p> <p>(9) If the villagers need to shoulder certain cost for fruit tree plantation, it should be affordable, with support from relevant government authorities expected.</p> <p>(10) It is expected that technical training and support can be provided.</p> <p>(11) Small water ponds can be built as many as possible.</p>
<p>Group 2</p> <p>(1) As the water and soil conservation project will bring benefits to future generations, ecological forests shall be planted on steep slopes to conserve water & soil, adjust the climate and landscape scenery along the banks so as to bring about multiple benefits for future development.</p> <p>(2) Since water and soil conservation project can boost local tourism industry, it is wondered whether technical training can be provided. It is suggested that fruit trees be planted in a row so as to facilitate management.</p> <p>(3) The expected fruit trees include pear, peach, and plum among other fruit trees fit for the region.</p> <p>(4) Local villagers strongly support the implementation of water and soil conservation project and it is expected that the transformation of hillside cultivated land could lead to increased revenue and improved water and soil conservation.</p> <p>(5) Road construction and renovation can reduce labor input into farm land. The issue of land occupation in construction shall be settled independently by villagers themselves.</p> <p>(6) In project implementation, it is expected that good strains of seeds can be chosen and irrigation ditches can be extended to the plots where fruit trees are planted. It is also expected that free technical guidance and training programs can be provided.</p>
<p>Relevant Authorities</p> <p>(1) Financial Bureau: ADB regulation on fund management shall be implemented strictly. And post-project management shall be carried out duly so that the project may benefit the public in the long term, with the focus on initiating the households to carry out self-driven management.</p> <p>(2) Agricultural Office: Due emphasis shall be paid on mobilizing the villagers' enthusiasm for the project. Rural tourism shall be promoted and strengthened with the plantation of fruit trees. Consequent management and maintenance of fruit trees shall be duly conducted through self-governance by villagers themselves. Post-project technical training shall be duly conducted.</p> <p>(3) Environmental Protection Agency: Technology transfer shall be duly conducted, including training and on-site visit. It is suggested that post-project management cost be included into project budget. Environmental assessment report shall be prepared.</p> <p>(4) Agricultural Bureau: It is suggested that fund for industrial restructuring be included into project budget. Fruit tree plantation, rural tourism and livestock breeding shall be promoted and developed.</p> <p>(5) Forestry Bureau: Project integration and coordination between relevant authorities should be strengthened to achieve good result with half the effort. Land planning (protective zone of basic farmland) shall be taken into consideration. Preliminary coordination, publicizing and notification to farming households shall be strengthened.</p> <p>(6) Tourism Bureau: Rural tourism shall be developed through in project area through project implementation.</p> <p>(7) Civil and Religious Affairs Bureau: Ethnic minority development shall be fully taken into consideration.</p> <p>(8) Huchao Township Government Office: Training programs shall be intensified to elevate the education level of villagers. Supervision shall be intensified to improve project quality during construction. It is suggested that post-project management cost be included into project budget. Good seeds shall be chosen for fruit trees and more fruit tree shall be planted proportionately. In the selection of breed variety for water and soil conservation, tourism concerns and village conditions shall be considered. Law</p>

enforcement shall be strengthened to guarantee that the water conservation facilities can function and benefit the public in the long run. Project integration and coordination between relevant authorities should be strengthened.

VI. Answers to some questions raised in group discussion

Mr. Wu Tong Heng:

- (1) As for whether the repayment of loans shall be assumed by villagers: the government will assume the repayment of loans.
- (2) As for compensation involved in the transformation of sloping fields into terrace fields: in practice, standing crops will be compensated with no other extra compensation.

VII. Other Opinions Presented in the Discussion:

- (1) Water pumping stations have been contracted to individuals in some villages. Due to high electricity charges, irrigation water charge is relatively high at CNY 15/hour.
- (2) The calculation of lift irrigation charge shall be based on electricity charge, equipment attrition, man power among others.
- (3) Currently run by village committee collectively, water pumping station in Longsan Village charges a fee of CNY 12/hour for lift irrigation, including electricity charges, maintenance cost, wages for workers. The village committee shall formulate relevant regulation on the operation and management of the pumping station.
- (4) Adjusted to local conditions, the pumping station can be operated and managed by village collectively, or contracted to individuals.
- (5) In case that pumping stations are contracted to individuals, the contractor shall deposit certain amount of security deposit to guarantee regular operation.
- (6) Different households may be involved in the transformation of sloping fields into terrace fields. Negotiation between different households, land adjustment arbitrated by the village committee shall be simpler and easier to be implemented.
- (7) Projects can be contracted to local people during construction.
- (8) It is expected that the project can be launched as soon as possible and implemented soon. It is promised that villagers and village committees will give full support to help solve the problems.
- (9) Security deposit shall be submitted before contracting the pumping station.

VIII. Summary of Opinions Solicited from Consultation

- (1) Basically, the public have realized the important impact of ecological improvement and evolving cropping pattern on lives, production and the ecological conditions, resulting in a favorable attitude toward the project.
- (2) All village cadres participating the consultation expressed their full support into the coordination and management in the process of implementing the project.
- (3) It is expected that programs such as "transformation of sloping fields into terrace fields", plantation of water and soil conservation forest, and construction of water cellar, ditches, pumping station and biomass pools could be initiated. It is also expected that fund could be provided to maintain and repair existing water resource facilities and tractor road be renovated to improve local traffic and production conditions.
- (4) Obsolete and in lack of maintenance and repair, existing irrigation facilities can not meet existing irrigation demand, resulting in high operational cost.
- (5) It is agreed that the villagers and village committees are obliged to manage and maintain water resource facilities so as to keep them in a better position to serve the people.
- (6) It is expected that more government fund shall be invested on fruit tree plantation, tractor road renovation, and construction of water tanks & cellars and biomass pools.
- (7) Some representatives proposed to establish an association to be involved in facility management.
- (8) Relevant and proper management measures shall be taken to avoid overcharged irrigation water charges. In case that pump stations are contracted to individuals with ownership belonging to the villages, the contractors shall deposit a security deposit

(9) to guarantee the regular operation of facilities.
 It was accepted by representatives from relevant local departments that the development of ethnic minorities shall be taken into consideration, that coordination between government departments, technology transfer and training shall be well conducted, that engineering quality shall be improved so as to guarantee post-project maintenance and management, that rural tourism shall be developed and that farming households shall be encouraged to conduct self-driven management and maintenance during project implementation.

Minutes of Group Discussion By Gender

Time	9:45-11:00Am, 22nd, May, 2006
Venue	Huajie Village, Shibao Township, Huaxi District
Participants of gender groups	(1) Female group (8): Liuqifeng, Zhoufeng, Luosimei, Songxiuping, Shiguangxiu, Hefangying, Yanghongming and Renyinwu. (2) Male Group (12): Luorenquan, Luoyulong, Luorensong, Luorenqing, Luojoyun, Luojoyou, Wangchen, Luorenyun, Luoxiaoding, Zhaozuling, Daiyonghong and Ruorenwen.
Participants from PPTA	Miss Xu Yinxin, Mr. Luo Zheng and Miss Zhen Danping
Participants from PMO	Ms Xu Ping, Mr. Kong Lingshen and Mr. Zhang Bing

Minutes of Female Group Discussion

- (1) Women play a major role in housework.
- (2) Both men and women will do farm works, with men mainly responsible for hard activities requiring more energy.
- (3) In this village, the women’s income is almost as same as men. There are a few men working outside of the village as migrant worker for a long time, while women peddling snacks in neighboring scenic areas. Adolescents uninterested in schooling will go outside as migrant worker, most of them working in urban areas in Guiyang and only a few in other provinces.
- (4) The wife will take care of the cash in the family in most cases, while either husband or wife can make major purchasing decision as long as it is reasonable. In most families, a joint decision will be made by husband and wife.
- (5) In terms of marriage, most young people choose their spouses by themselves with a low divorce rate.
- (6) There is an elementary school from Grade 1 to Grade 3 in the village. For Grade 4 to Grade 6, the kids will go to Ludi Village, the neighboring village, for schooling, and Shibao Town for junior high school education. Both boys and girls are educated equally. Most of the kids receive a minimum education of junior high schools, with some kids uninterested in schooling quitting from schools after graduation from elementary schools.
- (7) Paddy rice, rapeseed, wheat and corn are commonly planted in the land with no other cash crops planted (even if cash crops are planted, it is difficult to sell them out, due to transportation problems). Domestic animals such as cattle, pig and rabbit are raised and kept regularly.
- (8) Without severe water shortage in this area, irrigation water is pumped from Tianhetan to paddy field at an hourly rate of CNY 7/mu (a unit of area). Irrigated 6-7 times annually on the average, the total yearly irrigation fee for 1 mu of paddy field amounts to less than CNY 50. With ownership belonging to the village, pumping machinery has been contracted to individuals. Normally dry land is not irrigated due to inconvenience.
- (9) Water and soil erosion in this area is severe, with thin layers of soil unsuitable for crop

- plantation.
- (10) As women, we welcome the “transformation of sloping field into terrace field” program through which layers of soil can be thickened and farm yield can be increased. In addition, with considerable improvement in irrigation conditions in the fields, manpower to carry water can be saved and we can plant more cash crops such as fruits, vegetables, etc. The project doesn’t have inherent negative impacts and will not result in any problems. Before the project implementation, measurement on the farmland will be made by us having the land use rights. After the soil improvement collectively transformed as terrace land, redistribution will be made among all related households by the village committee in an equal and reasonable manner. There will be no problems for land redistribution.
 - (11) After completion of the project, we can plant plenty of fruit trees such as peach tree so that when peach trees blossom, urban residents could be attracted to spend their holidays here by enjoying rural scenery and picking peaches freshly from trees by themselves.
 - (12) We are not concerned with the minor negative impacts of the project. As long as there is improved/transformed land available for plantation by farmers, little opposition from the village will be encountered by the project.
 - (13) As long as the road here can be renovated and improved, we are confident in making our lives better by planting cash crops and fruit trees instead of seeking jobs outside.
 - (14) No training program in plantation is available. It is expected that relevant government departments can provide training and development programs in fruit tree plantation, aquiculture & poultry, and restaurant operation and tourism.
 - (15) We knew that there is available of micro-credit. However, the credit union is reluctant to lend us the money for fear that peasants could not repay the loan. We are willing to borrow money from the credit union if the application procedure is not too complicated and adjusted planting patterns resulted from project completion are profitable.
 - (16) During the project construction, we are willing to input our labor into project construction, as this is our beneficial project.
 - (17) We think it feasible to establish the water user association. We will choose some capable people with integrity to serve the public as members of the association, who shall be elected democratically via a village referendum no matter they are cadres, party members or ordinary villagers.

Minutes of Male Group Discussion

- (1) Men and woman share housework with each other, with women playing a major role in washing clothes, cooking and raising pigs etc.
- (2) With respect to farming activities, men are mainly responsible for heavy work like ploughing. Other farming activities are usually shared between men and women.
- (3) Currently the main purpose of farming on paddy fields is to feed the mouth while cash income mainly depends on working outside. Family income is determined by the capacities of husband and wife. Most of the men work outside in non-farming seasons and they return home to do farming activities in busy farming season. In households with spare manpower, young adults are inclined to work outside of the village as migrant workers in the whole year.
- (4) Family financial affairs are managed by either husband or wife, depending on his/her capacity of financial management. In local families, it is common that women are in charge of financial affairs, however, both husband and wife make decisions on purchasing commodities for domestic usage through consultation.
- (5) In terms of marriage, most young people choose their spouses by themselves with a low divorce rate.
- (6) Plants such as paddy rice, corn, pepper, rapeseed, peach, pear and walnut, etc, are commonly grown in the field. Domestic animals such as pigs, cattle and chicken are raised by individual households on a small scale.

- (7) With water at a low ground level and farmland at a high ground level, the main water for irrigation is pumped from Huaxi Reservoir. The power company offers preferential price for electricity consumption in irrigation at a rate of 0.1 CNY/ KW/H. For example, it charges CNY 7 for one hour to use water pumping with a capacity of 55KW to irrigate farm land. With its capacity of irrigating 1 mu one hour and the need to conduct 6~8 times of irrigation in a year, the annual irrigation cost for a mu (a unit of area) of paddy field amount to approximately CNY 50.
- (8) There are elementary schools in some villages. Children in villages without elementary schools have to go schooling in other villages. Both boys and girls are eligible for schooling equally.
- (9) Water & soil erosion in the area is rather severe with thin layers of soil. Water and soil cannot be conserved unless the sloping fields are transformed as terrace fields.
- (10) Once the water & soil conservation program is finished, labor can be saved and labor intensity of women can be eased. After the transformation of sloping fields, the farm yield can be increased and the plantation of fruit trees can increase family income. The program can improve the overall ecological environment, too. As a result, local people are in favor of the program. During construction, the issues like land adjustment shall be coordinated and settled by village committees.
- (11) As an environment-friendly project, the water and soil conservation program has few negative effects.
- (12) It is expected that cropping practice could be adjusted to plant cash crops such as peach, pear, loquat and other vegetables.
- (13) The poor transportation conditions pose an obstacle to economic development. Relevant training programs in fruit plantation and maintenance had been provided by local government.
- (14) During implementing the activities such as crop pattern readjustment, or other economic development by the farmers, micro-credit shall be considered to solve the problem of lack of fund.
- (15) With pumping irrigation stations and relevant water channels managed by local villagers and water pumping stations contracted to individuals, the village committee is in charge of setting water price and formulating management regime and supervision guidance. With village committee playing a leading role, villagers shall input their manpower into clearing the channels.
- (16) Currently, water and soil erosion results in thinning of soil layer.

Summary:

- (1) Men and woman share house work with each other, with women playing a major role in house-works as washing clothes, cooking and raising pigs etc, while men are mainly responsible for heavy farm-work.
- (2) In this village, family income is determined by the capacities of husband and wife. Most of the men work outside in non-farming season and they return home to do farm work in busy farming season. Generally speaking, the women's income is as almost as man. A few men work outside of the village as migrant workers for a long time and women peddle snacks in neighboring scenic areas. Adolescents uninterested in schooling go to the outside world as migrant workers, with most of them working in urban areas in Guiyang and only a few of them working in other provinces. In local families, it is commonplace that women are in charge of financial affairs, however, both husband and wife make decisions on purchasing commodities for family use through consultation.
- (3) In terms of marriage, most young people choose their spouses by themselves with a low divorce rate.
- (4) There is an elementary school from Grade 1 to Grade 3 in the village. For Grade 4 to Grade 6, the kids will go to Ludi Village, the neighboring village, for schooling, and Shibao Town for junior high school education. Both boys and girls are

- educated equally. Most of the kids receive a minimum education of junior high schools.
- (5) Paddy rice, rapeseed, wheat and corn are commonly planted in the land with no other cash crops planted (even if cash crops are planted, it is difficult to sell them out, due to transportation problems). Domestic animals such as cattle, pig and rabbit are raised and kept regularly.
 - (6) Without severe water shortage in this area, irrigation water is pumped from Tianhetan to paddy field at an hourly rate of 7 Yuan/ mu (a unit of area). Irrigated 6-7 times annually on the average, the total yearly irrigation fee for 1 Mu of paddy field amounts to less than 50Yuan. With ownership belonging to the village, pumping machinery has been contracted to individuals. Normally dry land is not irrigated due to inconveniences.
 - (7) Water and soil erosion in this area is severe, with thin layers of soil unsuitable for crop plantation.
 - (8) Villagers welcome the “transformation of sloping field into terrace field” program through which layers of soil can be thickened and farm yield can increase. In addition, with considerable improvement in irrigation conditions in the fields, manpower and time to carry water can be saved and villagers can have more time working over the farmland. After the transformation of sloping fields, the farm yield can be increased and the plantation of fruit trees can increase family income. The program can improve the overall ecological environment, too. As a result, local people are in favor of the program. Before the project implementation, measurement on the farmland will be made by us having the land use rights. After the soil improvement by collectively transformed as terrace land, redistribution will be made among all related households by the village committee in an equal and reasonable manner.
 - (9) The area features wonderful natural scenery. After completion of the project, villagers can develop rural tourism by planting plenty of fruit trees such as peach tree so that when peach trees blossom, urban residents could be attracted to spend their holidays here by enjoying rural scenery and picking peaches freshly from trees by themselves.
 - (10) It is agreed on by the villagers that to work outside cannot earn much money. As long as the road here can be renovated and improved, we are confident in making our lives better by developing tourism-related businesses and planting cash crops & fruit trees instead of seeking jobs outside.
 - (11) Except for technical training programs in cattle-raising and women hygiene, no training program in plantation is available to villagers. It is expected that relevant government departments can provide training and development programs in fruit tree plantation, aquiculture & poultry, and restaurant operation and tourism once this project is implemented.
 - (12) The villagers are willing to borrow money from the credit union when they need the fund to change cropping patterns so as to increase revenue. With an understanding of micro-credits and uncomplicated application procedure, both husband and wife can apply for them with their signatures on the application form.
 - (13) Villagers are willing to input man-power into project implementation. Villagers think it feasible to establish the water user association and choose some capable people with integrity to serve the public as members of the association, who shall be elected democratically via a village referendum no matter they are cadres, party members or ordinary villagers.