

SFG1980

Project for Post-earthquake Restoration and Reconstruction of
Municipal Infrastructures in Lushan County in Ya'an City with
World Bank Loan

Social Assessment Report



Sichuan Fontal Strategic-Consulting Co., Ltd.

December, 2015

Contents

1. Project Overview	3
1.1 Project Background	3
1.2 Project Contents	3
1.2 Project Impact Evaluation Scope.....	7
1.2.1 Area under Direct Impact of Land Acquisition and Demolition for the Project.....	7
1.2.2 Evaluation Scope in This Report	8
2. Social assessment Indicators and Social Investigation	10
2.1 Social assessment Method.....	10
2.2 Evaluation Indicators for Project Social Impact.....	10
2.3 Social assessment and Investigation.....	12
2.3.1 Investigation Method.....	12
2.3.2 Investigation Scope.....	12
2.4 Investigation of Social Economic Conditions	14
2.4.1 Social Economic Conditions in Ya'an City.....	14
2.4.2 Social Economic Conditions in Project Districts and Counties.....	15
2.4.2 Social Economic Conditions in Townships and Towns Involved in the Project	17
2.4.3 Populations of Affected Villages	17
2.4.4 Situations of Lands in Villages Affected by Land Acquisition.....	18
2.4.5 Description of Social Economic Conditions in Investigation Sample	19
2.5 Investigation of Women Development in the Project Area	24
2.5.1 Distribution of Women in the Project Area.....	24
2.5.2 Degree of Participation of Women in Economic Activities in Project Area	25
2.5.2 Degree of Participation of Women in Political Activities in Project Area	26
2.5.3 Analysis of Demands of Women Development.....	26
2.6 Investigation of Modes of Communications and Transportation in Project Area.....	27
2.6.1 Basically Formed Road Traffic Network in Project Area	27
2.6.2 Widely Undeveloped Public Transport in the Project Area	28
III. Lack of parking lots in city district.....	29
IV. Going-out mode of local residents.....	29
2.7 Investigation of Current Situations of Disaster Prevention and Reduction in Project Area	31
2.7.1 Deficient Emergency Refuges and Emergency Escaping Passages	31
2.7.2 Investigation of Disaster Relief Commanding System and Emergency Plan.....	32
2.7.3 Investigation of Current Situations of Flood Control.....	33
2.7.4 Investigation of Disaster Prevention Awareness.....	34
3. Identification of Stakeholders and Social Suitability	36
3.1 Stakeholders and Their Appeals	36
3.2 Mutual Suitability of the Project and Its Stakeholders	39
3.2.1 The Project satisfies the Overall Post-earthquake Reconstruction Planning of Lushan	39
3.2.2 Social Suitability of the Affected Public	40
3.2.3 The Project adapts to other stakeholders.....	40
4. Assessment on Positive Social Impacts of the Project	43
4.1 Disadvantages for development of the affected area.....	43
4.1.1 Poor traffic facilities	43
4.1.2 Shortage of emergency evacuation roads and shelter squares	43
4.2 The Project is Beneficial to Improve Infrastructure	44
4.2.1 The Project improves the risk-standing ability of the city	44
4.2.2 The Project facilitates improvement of traffic facilities and make convenient the traveling of local residents	44
4.2.3 Further improve the flood control facilities of the city and enhance the flood control capacity	45
4.3 The Project Facilitates Local Economic Development and Realizes Common Prosperity	45
4.3.1 The Project will improve economic development environment of Ya'an.....	45
4.3.2 The Project will increase income of the "40% bottom income group"	46

4.4	The Project will Facilitate Women Development.....	46
4.5	The Project Shows Sustainability of Social Development	47
4.5.1	Economic sustainability	47
4.5.2	Social sustainability	47
5.	Negative Social Impacts and Risks	48
5.1	Land Requisition of the Project Will Result in Certain Impact	48
5.2	House Demolition of the Project May Lead to Certain Risks	48
5.3	Impact during the Construction Stage	48
6.	Social Management Plan and Its Implementation.....	50
6.1	The Design Optimization Program for the Project.....	50
6.2	Make Good Compensation for Land Requisition.....	50
6.3	Measures to Relieve Social Impact of the Project.....	50
6.3.1	Safety management during construction stage of the Project.....	50
6.3.2	Dust and Noise Management during the Construction Stage	51
6.3.3	Management to Construction Workers.....	52
6.4	Social Management Plan	53
7.	Mechanism for Complaint and Grievance Redress.....	57
7.1	Ways to Collect Complaints and Grievances	57
7.2	Procedures of Complaint and Grievance	57
7.3	Principles to Handle Complaints/grievance	58
7.4	Contents and Ways of Reply	58
7.4.1	Contents of Reply	58
7.4.2	Ways of Replay	58
7.5	Trace Record and Feedback of Complaints and Grievance.....	59
8.	Monitoring on the Implementation of the Social Management Plan.....	60
8.1	Internal Monitoring	60
8.1.1	Purpose of Internal Monitoring.....	60
8.1.2	Approaches for Internal Monitoring.....	60
8.1.3	Contents of Internal Monitoring	60
8.1.4	Cycle and Report of Internal Monitoring.....	60
8.2	External Monitoring	61
8.2.1	Executor of External Monitoring.....	61
8.2.2	Purpose of External Monitoring	61
8.2.3	Approaches and Contents of External Monitoring	61
8.2.4	Cycle and Report of External Monitoring.....	61
9.	Social Assessment Conclusion and Suggestion.....	62
9.1	Findings in Social Assessment	62
9.2	Conclusion.....	63
9.3	Suggestion.....	64
9.3.1	Public Participation and Publicity	64
9.3.2	Reduce Influence during the Construction Period of the Project	64
9.3.3	Handling of Construction Camps and Roads.....	65
9.3.4	Gender sensitivity and universal tolerance design	65
9.3.5	Improvement of Management Capacity of Related Organizations during the Operation Stage of the Project	65
9.3.6	The mechanism of public participation during the construction and operation stages of the Project	65

1. Project Overview

1.1 Project Background

At 8.02am on April 20, 2013, a magnitude-7 earthquake took place in Lushan County in Sichuan Province. The violent earthquake in Lushan County affected 32 counties (cities, and districts) in such cities and prefectures as Ya'an, Chengdu, Leshan, Meishan, Ganzi, Liangshan, Deyang, etc., and the affected population is about 2.184 million. Lots of old housings collapsed, and the structures of housings not collapsed seriously damaged; such public service facilities as schools and hospitals and municipal services facilities, such as water supply, drainage and gas supply, are damaged in various degree; the major highways collapsed and damaged in several places, such secondary disasters as landslide, collapse and debris flow seriously occur, and the ecology environment is subjected to the serious threat; there were many aftershocks with high magnitude and large continuous influence.

In the disaster-affected area in this time, the geological conditions are complicated, and the secondary disasters easily occur. The disaster area is located in the transition zone from Chengdu plain to Qinghai-Tibetan plateau, which is a junction of three seismic faulted zones of Longmen Mountain, Xianshui River and An'ning River; in the area there are high mountains, steep slopes, deep river valleys, broken rock masses and large rainfalls, as well as serious secondary disasters, such as debris flow, landslides, collapse, etc. with concealment, suddenness and multiple. The disaster area is the important water conservation area and ecological barrier in the upstream of Yangtze River, a key nature conservation area of biodiversity and core area of habitat for world natural heritage panda; Ya'an is a national demonstration city of ecological civilization construction, so the ecological restoration and environmental protection tasks are heavy and have very high requirements. As being the traffic throat inland for connection of Tibet, Yunnan and Panzhihuan-Xichang District, the disaster area is a regional materials trade center and important commodity distributing center, but there are a few traffic aisles, the road network density is low, the traffic capacity is poor, and the logistics distribution cost is high, especially, there are serious geological disasters threats; therefore, the task for guaranteeing smooth transportation is very difficult. The disaster area mainly depends on the hydro-power resources and exploitation & utilization of mineral resources with single industrial structure. The special agricultural advantages are not brought into full play, there are a few enterprises with industrial advantages, the service industry develops slowly, the social undertakings are weak, and the per capita gross regional domestic product and per capita income of urban and rural residents are all lower than the national average level. The Lushan County and Baoxing County are the areas severely affected by Wenchuan Earthquake, and other places are the area generally affected by Wenchuan Earthquake; two earthquakes have a small interval time and create large damages, the previous damages haven't been restored yet and the new damages have occurred; the local financial capacity is low, and the masses in the disaster area have heavy burden and difficult living conditions.

The Project for Post-earthquake Restoration and Reconstruction of Municipal Infrastructures in Lushan County with World Bank Loan include the subprojects in 7 districts (counties) in Ya'an City, such as Yucheng District, Mingshan District, Lushan County, Tianquan County, Baoxing County, Shimian County and Yingjing County.

1.2 Project Contents

The Project for Post-earthquake Restoration and Reconstruction of Municipal Infrastructures in Lushan County with World Bank Loan relates to the subprojects in 7

districts (counties), including Yucheng District, Mingshan District, Lushan County, Tianquan County, Baoxing County, Shimian County and Yingjing County in Ya'an City. In this Project, the proposed objective is to create the tough infrastructures, enhance the capacity of disaster prevention, mitigation and emergency response, and guarantee the safe and sustainable urban development. The construction contents in 7 subproject districts and counties are shown in the following Table 1-1:

Table 1-1 Summary of Construction Contents in the Project

Project District /county	Name of the subproject	Category	Major work content	Land area of the project (mu)	Land nature
Yucheng District	Refuge Square	New construction	The refuge square in Beijiao Town, Yucheng District covers an area of 34149.59 square meters (or 512 mu), with the effective refuge area of 28000 square meters. It is a Class II emergency refuge area, which can accommodate 9300 people and supply them with living needs for 3 to 30 days. The area is equipped with necessary facilities for disaster relief and escape.	20	Collective
				31.2	State-owned
	Southern East Outer Ring Road Project	New construction	The new urban area is 6317.401m long, including 19m and 29 wide redlines. The area is equipped with water supply works, water drainage works, lighting works, electric power and communications pipeline works, gas works, greening works, traffic safety and management facility works (marking lines, barrier-free facilities, traffic lights, separating facilities between motor and non-motor vehicles, speed limit and deceleration facilities). The line includes 1 medium bridge, 5 minor bridges, 2 box-type channels and 17 culverts.	348.5	Collective
Mingshan District	Urban road	New construction	The newly urban roads are 2467.951m in length, supported by water supply works, drainage works, lighting works, power communication pipeline works and green landscape works. Pingqiao Road No. 1 is 285.335m long, Pingqiao Road No. 2 is 138.033m long, Pingqiao Road No. 3 is 162.561m long, Pingqiao Road No. 5 is 195.216m, Pingqiao Road No. 6 is 1111.527m, and the extension line of Minsheng Road is 575.279m long.	143.8	Collective
	Pedestrian bridge crossing Mingshan River	New construction	There is one pedestrian simply supported prestressed hollow slab bridge crossing Mingshan River, with the total deck width (including rail): 5.5m, and total bridge length: 46.04m.	0.4	Collective
	Refuge Square (next to the Museum of Tea History)	New construction	New Class III emergency shelter, with an area of 7287m ²	11.0	Collective
	Refuge Square (Wulizhen Square)	Reconstruction	Reconstruction of Class II emergency shelter, with the area of 22000m ²	33.6	State-owned
	Flood embankment at the west side of Mingshan River	New construction	Dike length 812.373m, green landscape 13000 m ²	24.4	Collective
	Flood embankment of Huaixi River	New construction	746.564m long dike on the left bank, 790.364m on the right bank dike, green landscape 23700 m	24.5	State-owned
				21.6	Collective

Project District /county	Name of the subproject	Category	Major work content	Land area of the project (mu)	Land nature
Lushan County	County road	New construction and reconstruction	Road works: the total length is 5.8km, width 8-20m, asphalt concrete pavement, including the reconstruction of the road length of 3.7km, new road length 2.1km; one newly built halfway bridge 282m in length and 10m in width; and 8 new cover culverts.	65.0	Collective
				32.1	State-owned
	Emergency Refuge Square Construction Project	New construction	4 new emergency refuge squares, with the total area of 33100 m ² , which can be used for emergency evacuation of 15,400 people. These four refuse shelters are: Northern Refuse Square in the old urban area covers an area of 9600m ² , which can accommodate 4400 people; Guangfuyuan Refuse Square covers an area of 9,300 m ² for 3700 people; Central Refuse Square has an area 5300 m ² for accommodating 3900 people; Southern Refuse Square in the new urban area covers an area of 8900 square meters for accommodating 3400 people.	8.9	Collective
Tianquan County	New Roads of Shaba Sub-district	New construction and reconstruction	The renovated roads in the old urban area are totally 2207.4m long with the width of 14~30m, and the new roads in Shaba Sub-district is 3901.7m in total with the width of 14~20m. The design includes the drainage pipeline network, electricity and communications, traffic safety and management facilities (marking, barrier-free facilities, traffic signal lights) and other supporting works.	100	Collective
	Old City Refuge Square	New construction	It is situated in the south of the western extension line and ring road northern extension line, covering an area of 8003 m ² .	15	Collective
	Shaba Refuge Square	New construction	Shaba Refuse Square is located in the south of the bridgehead of Liangshuijing Bridge in Shaba Sub-district, covering an area of 10680 m ² , including an emergency command center, material reserve management space, water supply engineering, radio communication, supporting underground parking lot etc.	15	Collective
Baoxing County	Emergency evacuation passage along the road along the river	Reconstruction	Road network in Baoxing County (Yanjiang Road as the emergency evacuation corridor): new riverside walkways, divided into two sections, Yongfusi Junction - Red Army Square, Qingyiyuan Bridge - Lianghekou Bridge southern bridgehead, with the total length of 2200km and width of 8m. The road is a walking road, which forms the riverside landscape, recreation zone, shelter, etc.	15.9	State-owned
	Zhongling Road North	Reconstruction	The road network of Baoxing County (Zhongling Road North): a reconstructed road at the original site, which connects Xinqiao Street at the starting point and connects Jianlian Resettlement Community at the ending point. The total road length is 6196.977m. At the same time, the traffic, water supply, drainage, electricity, communications, lighting, green and other facilities shall be provided.	83.6	State-owned
	Lianghekou Water Plant	New construction	The water supply capacity of the new water supply is 2,500t/d, with 3km water pipes, 6km supporting pipe network 6km and plant auxiliary facilities.	10	State-owned

Project District /county	Name of the subproject	Category	Major work content	Land area of the project (mu)	Land nature
Yingjing County	Road	New construction and reconstruction	The new Jinghe Road western section is classified as the secondary trunk road of the city, with the road length of 3430.412m and road width of 16m; the new park branch road is classified as the urban branch, which is 352.156m long and 12m wide with two-way double lanes. The reconstructed Fuyu Road is classified as Class IV, which is 3522.888m long and 6.5m wide with two-way two lanes; the reconstructed Fuwu Road is classified as an urban branch road, which is 261.699m long and 9m wide. The asphalt concrete pavement is used and the pavement is built by granite. The design includes pavement reconstruction, drainage pipe, rainwater pipe, water supply pipe, gas pipe as well as road lighting project.	115.0	State-owned
	Flood discharge channel regulation	Reconstruction	The existing flood prevention channels in the county, which are 3240.324m long and 1.5~ 5m long, will be reconstructed, and flood control standard is for 20-year floods. Including: 1. Qingzhuxi 784.407m long, begins at Hengyan Weir and ends at Yinghe levee; 2. Zengjia Ditch is about 1431.624m long, originating from the Xiaopingshan Section of beltway highway before ending at the third development zone; 3. Qianjia Ditch is 1024.293m long, starting from Beltway Ancient Town Section and ending at Hengyan Weir. A garbage collection system will be built along the flood prevention channel, and the landscape greening works shall be built at the side of the sewage interception main channel of Qingzhuxi Section (tube diameter d400mm, length 800m).	23.9	State-owned
	Emergency Shelter	Reconstruction	One Class III shelter shall be reconstructed. The original site is Yangliuhe Street Park. In this design, emergency refuge facilities are to be added. The project covers an area of about 7000 square meters, which can accommodate about 4000 people.	10.5	State-owned
Shimian County	Road/river embankment works	New construction and reconstruction	The total road length is 8373.78m, including 6607.37m new roads and 1766.31m reconstructed roads. The drainage, landscaping, lighting, bus stations, traffic safety and management facilities (sign and marking, road barrier-free facilities, traffic signal light) shall be provided. Dianli Road is provided with water supply, electricity and communication works, and Yanzi Road is provided with the power and communication works.	192.3	State-owned
	Bridge works	New construction	One new medium bridge which is 60m long with bridge deck width of 15m will be built over Nanya River; one new Lianpowan major bridge will be built (594m long and 19m wide) will be built over Dadu River; a new Yanziqiao medium bridge (30m long and 18.5m wide) will be built; and a National Highway 108 major bridge will be newly constructed (372m long and 13m wide). The embankment of Yanzi River Area, standard of flood control is 50 years.	18.8	State-owned
	Refuge square works	New construction	1. The Yanzi Sub-district emergency shelter is built, with a total area of 8500 square meters, which can accommodate 4000 people; 2. Build an emergency shelter in the northern area, with the total area of 28600 square meters, which can accommodate 6000 people.	55.6	State-owned

1.2 Project Impact Evaluation Scope

1.2.1 Area under Direct Impact of Land Acquisition and Demolition for the Project

This Project relates to 7 districts (counties), including Yucheng District, Mingshan District, Lushan County, Tianquan County, Baoxing County, Shimian County and Yingjing County in Ya'an City. The construction land for subproject in Yucheng District relates to 6 villages in 2 townships in Yucheng District of Ya'an City, namely, Hongxing Village in Beijiao Township, and Longxi Village, Dayan Village, Shunlu Village, Zhaiping Village and Tianbao Village in Daxing Township; the construction land for subproject in Mingshan District relates to 6 villages in 2 townships in Mingshan District, namely, Jianzhu Village, Zixia Village, Defu Village and Huaixi Village in Mengyang Town, and Pingqiao Village and Yuguang Village in Chengdong Township; the construction land for subproject in Lushan County relates to 2 communities in 1 township in Lushan County, namely, Chengbei Community and Chengdong Community in Luyang Town; the construction land for subproject in Tianquan County relates to 2 villages in 1 township, namely, Shaba Village and Huangtong Village in Chengxiang Town; the construction land for subproject in Baoxing County relates to 6 village communities in 2 townships in Baoxing County, namely, Muping Community, Xinbao Village and Shunjiang Village in Muping Town, and Zhongba Village, Shangba Village and Lingguan Community in Lingguan Town; the construction land for subproject in Yingjing County relates to 1 village in 1 township in Yingjing County, namely, Nanluoba Village in Fucheng Township; the construction land for subproject in Shimian County relates to 5 village communities in 2 townships in Shimian County, namely, Xiangyang Community, Chengbei Community, Yanzi Community, Shunhe Community in Xinmian Town, and Yulong Village in Yonghe Township.

Among them, the subprojects in Yucheng District, Mingshan District, Lushan County and Tianquan County involve the permanent land acquisition and housing demolition; the subproject in Yingjing County only involves the housing demolition, and 24 households in Nanluoba Village in Yingjing County are involved in the housing demolition; a part of an enterprise in Xinmian Town in Shimian County is involved in the demolition, and the permanent land acquisition and housing demolition are not involved; all lands for subproject in Baoxing County are state-owned flood land, and the land acquisition and demolition are not involved. The impact scope of land acquisition and demolition in 7 subproject districts and townships is shown in the following Table 1-2.

Table 1-2 Statistics of Impact Scope of Land Acquisition and Demolition for the Project

Project county/district	Permanent land requisition			House demolition			Permanent land requisition and house demolition	
	Area (mu)	Affected households	Affected population	Area (M ²)	Affected households	Affected population	Affected households	Affected population
Yucheng District	368.5	364	1337	45810	113	480	113	480
Mingshan District	201.2	168	579	4479	27	117	27	117
Lushan County	73.9	77	230	2200	2	13	2	13
Tianquan County	130	57	195	21600	120	500	32	95
Yingjing County	Yingjing County is not affected by land requisition			3180	24	81	0	0
Shimian	Shimian County is not affected by land requisition or house demolition from the Project, but just some							

County	demolition and relocation of an enterprise.							
Baoxing County	Baoxing County has no land requisition or house demolition from the PProject							
Total	<u>773.6</u>	<u>666</u>	<u>2341</u>	<u>77269</u>	<u>286</u>	<u>1191</u>	<u>174</u>	<u>705</u>

1.2.2 Assessment Scope in This Report

This Project relates to 7 districts (counties), including Yucheng District, Mingshan District, Lushan County, Tianquan County, Baoxing County, Shimian County and Yingjing County in Ya'an City. 2 townships are impacted in Yucheng District in Ya'an City, namely, Beijiao Township and Daxing Township; 2 townships are impacted in Mingshan District, namely, Mengyang Town and Chengdong Township; 1 township is impacted in Lushan County, namely, Luyang Town; 1 township is impacted in Tianquan County, namely, Chengxiang Town; 2 townships are impacted in Baoxing County, namely, Muping Town and Lingguan Town; 1 township is impacted in Yingjing County, namely, Fucheng Township; 1 township is impacted in Shimian County, namely, Xinmian Town.

Totally, 26 villages and communities are impacted in this Project. 6 villages are impacted in the subproject in Yucheng District, namely, Hongxing Village in Beijiao Township, and Longxi Village, Dayan Village, Shunlu Village, Zhaiping Village and Tianbao Village in Daxing Township; 6 villages are impacted in the subproject in Mingshan District, namely, Jianzhu Village, Zixia Village, Defu Village and Huaixi Village in Mengyang Town, and Pingqiao Village and Yuguang Village in Chengdong Township; 2 communities are impacted in the subproject in Lushan County, namely, Chengbei Community and Chengdong Community in Luyang Town; 2 villages are impacted in the subproject in Tianquan County, namely, Shaba Village and Huangtong Village in Chengxiang Town; Shunjiang Village and Xinbao Village in Muping Town in Baoxing County, and Shangba Village, Zhongba Village and Lingguan Community are impacted; Nanluoba Village in Fucheng Township is impacted in the subproject in Yingjing County; Shunhe Community, Chengbei Community, Xiangyang Community and Yanzi Community in Xinmian Town are impacted in the subproject in Shimian County.

Table 1-3 Statistics of Project Social Assessment Scope

District and County	Townships	Village/Group
Yucheng District	Daxing Township	Longxi Village
		Dayan Village
		Shunlu Village
		Zhaiping Village
		Tianbao Village
	Beijiao Township	Hongxing Village
Mingshan District	Mengyang Town	Jianzhu Village
		No.1 group
		Zixia Village
		No.1 group
	Chengdong Township	Defu Village
		Huaixi Village
		Pingqiao Village

		Yuguang Village
Lushan County	Luyang Town	Chengbei Community
		Chengdoing Community
Tianquan County	Chengxiang Town	Shaba Village
		Huangtong Village
Yingjing County	Fucheng Township	Nanluoba Village
Shimian County	Xinmian Town	Shunhe Community
		Xiangyang Community
		Chengbei Community
		Yanzi Community
Baoxing County	Muping Town	Xinbao Village
		Daheba in Shunjiang Village
	Lingguan Town	Shangba Village
		Zhongba Village
		Lingguan Community

2. Social Assessment Indicators and Social Investigation

As for social Assessment for the project of World Bank, the project and its implementation method are analyzed according to characteristics of organization structure of local social culture so as to realize the development objective better, the great attention is paid to the special groups at the same time, and the public participation is emphasized in the method.

In this social Assessment report, the comprehensive Assessment is carried out for the social impact caused by the project for the involuntary resettlement group and other groups in the aspects of economy, infrastructures, communications and psychological state of the residents. Meantime, in the previous period in the project identification, the minority nationalities are not involved in the project area, therefore, the minority nationalities may be used as the social Assessment indicator unnecessarily.

2.1 Social Assessment Method

Generally, the frequently-used comprehensive methods in the social Assessment include the “basic problem method”, “no action substitution method” and “logic framework method”.

The basic problem method is to combine the social assessment, social planning and social development, so as to look for the balance between research and action needs. Its outstanding feature is the “problem orientation”, and the research is carried out mainly according to the social problems involved in the evaluation.

The no-action substitution method is to compare the policies or conditions actually happened after implementation of the project with the conditions possibly happened without any external interruption, so as to determine the actual benefit, impact and effect of the project. This is the basic train of thought for research in the early period of the Social assessment.

The logic framework method is the major method used for post-evaluation of the project, especially, the international organization often uses it for the post-evaluation of the aid project. The vertical logic and horizontal logic are included in the logic framework.

This Social assessment report belongs to the early stage evaluation of the project, adopts the combination of three methods above. The key points are to pay great attention to the importance of social investigation in the early stage of the project, figure out the relationship of measures and objective of the project, analyze the project and uncertainties in the economic and social environments in the project, and carry out the comparison of conditions before and after implementation of the project, thereby wholly evaluating the social impact created by the project and guaranteeing the realization of the social benefit objective of the project.

2.2 Assessment Indicators for Project Social Impact

The social impact evaluation in this Project involves the contents in 8 aspects, including project resettlement, economic conditions, road traffic facilities and domestic installations, public support and social suitability, 40% bottom-income group, social gender state (focus on women) and minority nationalities; see the following summary sheet of Social assessment indicators system for details:

Table 2-1 Summary of Social Assessment Indicators Systems

Basic Category	Social Objective	Evaluation indicator	
Project resettlement	Ensure that the involuntarily resettled persons have the living level no lower than that before resettlement, pay great attention to the livelihood restoration of peasants with land lost, and ensure that the peasants with land lost have the living security.	Quantity of affected population; compensation and resettlement standards for demolition; resettlement for demolition and employment resettlement; payment of compensation fees, implementation and effect of livelihood restoration.	
Economic conditions	Promote the social and economic development in the project area	Change of natural resources (which kind of impact will be created mainly by the change of the land resource); employment rate; main source of finance (income level); opportunities for employment from the project; particular attention to the development of national distressed area	
Road facilities and domestic installations	Ensure the basic living conditions of the residents in the project area; ensure the basic conditions for local economic and social development; ensure the convenient transportations of the residents and enterprises in the area around the project.	Summarize and analyze the conditions about basic traffic facilities and domestic installations in the project area, including health care, education, hygiene, etc. inside the village, determine whether the residents inside the project area have the convenient public transportation, and analyze the benefits brought to the residents after completion of this Project.	
Public support and social suitability	Ensure that the public supports this Project, and the resettled persons due to this Project have no any inadaptation caused due to change of identity or other impacts.	Public support for the project; satisfaction of the public to the social development objective in the project; mental status during project construction; inadaptation caused due to change of identity.	
40% bottom-income group	Pay attention to various policy guarantees and benefit appeals of the bottom-income group, disabled persons and low-income families in the Project.	The 40% bottom-income group covers the disadvantaged groups; analyze whether the implementation of this Project can create the positive social impact on the bottom-income group in the area around the project.	
Social conditions	gender	Guarantee that the women actively participate in the project activities and get certain economic incomes.	Position and role of men and women in a family in the local political and economic activities; especially employment of women; whether can the project bring economic incomes to the women?
Minority nationalities	In case of existence of minority nationalities in the project area, ensure the equal development of minority nationalities in the project area and reduce the impact on the minority nationalities and religions	Analyze the type of minority nationalities and locations for religious activities in the project area, as well as impact on religions and customs.	
Function of post-disaster restoration and disaster mitigation of this Project	Pay attention to the relationship of this Project and post-earthquake restoration and reconstruction of Yucheng County, define the role and function of this Project in post-disaster restoration and disaster prevention and reduction, and place the research focus on the role of the refugees.	Investigate and analyze the current situations of emergency refuges in the project area, emergency plans of the local governments and safety awareness of the public in case of occurrence of disaster.	

Here the “40% bottom-income group” needs to be explained, which has the direct relationship with poverty. This evaluation indicator refers to the consistency of appeals and desires of “40% bottom-income group” (including disadvantaged group)

in the project area with the objective of this Project, and pays attention to the impacts of this Project on this group.

Box 1 40% bottom-income group

Currently, the definition of “40% bottom-income group” is not unified in China. The rural residents can be included into this group, and a part of low-income group in the urban residents may also fall into this group. Because there are many villages in the project area, most of affected residents in the rural area in the evaluation scope of this report may be included into the 40% bottom-income group, in addition, a part of low-income group in the urban area can fall into this group.

At the same time, the 40% bottom-income group also covers the poverty and disadvantaged groups, and has the inevitable link with poverty. Paying attention to 40% bottom-income group can also better take the poverty and disadvantaged groups in the area affected by the project into consideration.

The disadvantaged group traditionally includes the disabled persons, low income group and households enjoying the five guarantees and so on; according to requirements of World Bank, the special attention must be paid to the “40% bottom-income group” in the project area; as per the above definition, the disadvantaged group is included in the “40% bottom-income group”.

2.3 Social assessment and Investigation

2.3.1 Investigation Method

The questionnaire method and interview method are mainly used as the social investigation method of the project; the design of the questionnaire and interview outlines shall follow a series of rigorous research and consultation process; the detailed procedure is as follows:

The investigation method will be determined according to investigation purposes. The open interview method shall be adopted for understanding the macroeconomic and social backgrounds, local policies and implementations, works to be carried out and suggestions for the project; the strict quantitative questionnaire method shall be adopted for investigating and collecting the basal data and understanding the wills or satisfactions of the affected persons.

After determination of investigation method, the key problems and key indicators to be obtained from the respondents will be arranged according to the differences of the respondents, so as to preliminarily design the corresponding interview outlines or questionnaire; the literature comparison and expert consulting are passing through the entire design process, in order to guarantee the quality of the outlines or questionnaire.

2.3.2 Investigation Scope

The social impact evaluation and investigation in this Project involves the following three aspects:

I. Functional government departments

The project investigation team has paid visit to a few important functional departments, such as Land and Resource Bureau, Social Insurance Bureau, Women’s Federation, Poverty Alleviation Office, etc., mainly collected the local social and economic data, and heard the opinions and suggestions from the local governments.



Figure 2-1 Meetings with Functional Government Departments Held by the Project Social assessment Team

II. Interview with key insiders and public opinion survey

The interview with key insiders mainly involves the opinions and suggestions from the principals of the town governments and village cadres in the affected villages about the project implementation.

During public opinion survey, the project team has carried out the direct door-to-door interview investigation for the affected villagers' groups in the areas around the project, filled in the questionnaires, and included the 40% bottom-income group into the process of questionnaire.

The questionnaires are designed independently for the public opinion survey of the affected persons in this Project. The process of field investigation is also a process of project promotion and public participation. 555 households are investigated in the project.

Table 2-2 Statistics of Project Public Opinion Survey

No.	Subproject Names	Quantity of Villagers Groups Affected (Including Community)	Quantity of Questionnaires
1	Yucheng District	6	120
2	Mingshan District	6	42
3	Baoxing County	5	70
4	Lushan County	2	60
5	Tianquan County	2	60
6	Shimian County	4	179
7	Yingjing County	1	24
Total		26	555



Figure 2-2 Public Opinion Survey Carried out by the Project Social assessment Team

2.4 Investigation of Social Economic Conditions

2.4.1 Social Economic Conditions in Ya’an City

Located in the intersection of Sichuan-Tibet Expressway and Sichuan-Yunnan Expressway and at a distance of 120km away from Chengdu City, Ya’an City is the transitional zone of Sichuan Basin and Qinghai-Tibetan plateau, transitional zone of Han culture and national culture, and transitional zone of modern central city and primitive natural ecological region, as well as the gate and only path of the ancient southern Silk Road, and once the capital of former Xikang Province. Ya’an City is a famous historical and cultural city in Sichuan Province and an emerging tourism city, and known as “rain city”. Ya’an City adjoins Aba Tibetan and Qiang Autonomous Prefecture in north, Ganzi Tibetan Autonomous Prefecture in west and south, and borders on Chengdu, Meishan and Leshan cities in east, and has a city field in an irregular form, namely, the north-south part is longer and the east-west part is narrow.

Ya’an is the home town of panda, and the quantity and density of wild giant panda alive stand first in the list in China. As an envoy of peace and friendship, the giant panda vanquishes not only the Europe, but also the world by its own unique charm. In 2006, “Sichuan Giant Panda Habitat” regarding Ya’an as principle has been successfully applied as the world natural heritage, included into the world natural heritage list. Ya’an has the largest number of wild giant panda and captive giant panda in the world.

Ya’an is the source of the world tea culture. And Ya’an is the starting pont of ancient Tea-horse Road, the source of Buddhist tea, and the production base of Tibetan tea with longest history and largest output. In March every year, “International Tea Culture Tourism Festival in Mengding Mountain” is held in the Mengding Mountain - world tea culture holy mountain.

Ya'an has the convenient transportation; Chengdu-Ya'an Expressway connects Ya'an and megalopolis Chengdu, with a space length of 128km and a time distance of 1 hour; the national roads 318 and 108 pass through the entire territory of Ya'an; Yaxi Expressway and Yale Expressway have also been opened to traffic. Ya'an is the starting point of Sichuan-Tibet Expressway which is awarded as Chinese Landscape Avenue by magazine "National Geographic", an east gate for entering into the Great Shangri-La, a large courier station on the western ring route of tourism in Sichuan Province. By taking the city district of Ya'an as a center, within a radius of 15-30km, such tourist attractions as Mengding Mountain, Bifeng Gorge, Chengdu Research Base of Giant Panda Breeding, Zhougong Mountain Hot Spring, Shangli Ancient Town, etc. are surrounding Ya'an, and the city and tourist attractions are closely connected with each other and depend on each other.

2.4.2 Social Economic Conditions in Project Districts and Counties

Yucheng District in Ya'an City is the location of Ya'an City People's Government, and the center of politics, economy, cultures, science and technology and communications, and covers an area of 1066.99km². Up to the end of 2014, the permanent population in the whole district is 360,900 persons, among them, the urban population is 211,100 persons, and the rural population is 149,800 persons. 24 townships, 191 villages, 4 subdistrict offices and 32 neighborhood committees are governed by Yucheng District. In addition, Yucheng District includes 4 streets, such as Dongcheng, Xicheng, Hebei and Qingjiang, 12 towns, such as Caoba, Zhongli, Yaoqiao, Hejiang, Yanchang, Shangli, Daxing, Shaba, Yanqiao, Duiyan, Duoying, Bifengxia, and 12 townships, such as Guanhua, Babu, Longxi, Kongping, Liba, Xianghua, Helong, Zhouhe, Nanjiao, Beijiao, Fengming and Wangyu.

Mingshan District belongs to Ya'an City of Sichuan Province, is located in the southwest edge of Sichuan Basin, and geographically in north latitude 29°58'-30°16' and east longitude 103°02'-103°23', borders on Pujiang County of Chengdu City in east, neighbors on Danleng County and Hongya County of Meishan City in south and Yucheng District of Ya'an in west, and adjoins Qionglai City in north, covers an area of 614km², and governs 9 towns, 11 townships, 192 administrative villages, 17 community neighborhood committees. Up to the end of 2014, the permanent population in the whole district is 280,600 persons, among them, the urban population is 45,900 persons, and the rural population is 234,700 persons.

Lushan County is located in the western edge of mountain area around Sichuan Basin, northeast part of Ya'an region, and upstream of Qingyi River. Lushan County adjoins Wenchuan county in north and neighbors on Chongzhou City, Dayi County and Qionglai City in northeast. Geographically, Lushan County is in the east longitude 102° 52'-103°11' and north latitude 30°01'-30°49'. In the territory of the county, the length of north-south part is 86.6km, and the width of east-west part is 24.4km in north, 19.42km in middle and 17.2km in south, and the territory area is 1364.42km². Lushan County governs 5 towns, 4 townships, 46 villages (communities) and 256 villagers' groups. Up to the end of 2014, the permanent population is 119,500 persons, among them, the rural residents are 78,600 persons, and the urban residents are 40,900 persons.

Tianquan County belongs to Ya'an City of Sichuan Province, is located in the western edge of Sichuan Basin, eastern foothills of Erlang Mountain, and upstream of Qingyi River; Sichuan-Tibet Highway (national highway 318) passes through the entire territory of Tianquan County. Tianquan County governs 15 towns and townships and covers an overall area of 2400km². The county is located at a distance of 180km apart from Chengdu, and 38km apart from Ya'an. At the end of 2014, the total population in

the Tianquan County is 150,000 persons, among them, the agricultural population accounts for 84%. The most part of population in Tianquan County is the Han nationality, and such minority nationalities as Tibetans also live in the county.

Baoxing County belongs to Ya'an region in Sichuan Province, is located in the western edge of Sichuan Basin, northern end of Ya'an region, and upstream of Qingyi River, geographically in the east longitude 102°29'-103°02' and north latitude 30°09'-30°56'. Baoxing County borders on Wenchuan and Xiajin in Aba Tibetan Autonomous Prefecture in north, and on Kangding, capital city of Garze Tibetan Autonomous Prefecture, in northwest, adjoins Lushan County in east and neighbors on Tianquan County. Baoxing County has many high mountains and gorges, and geographically is higher in northwest and lower in southeast. At the end of 2014, the total number of households in the whole county is 21784, with a total population of 59,084 persons, among them, the agricultural population is 42,306 persons and nonagricultural population is 16,778 persons.

Yingjing County is located in the hinterland of Ya'an, borders on Ya'an City in northeast and Hongya in southeast, adjoins Hanyuan in southwest and Luding in west, and neighbors on Tianquan in north; G5 Beijing-Kunming Expressway and national highway No.108 pass through the entire territory of the county. Yeniu Mountain (Niubei Mountain), the highest place in the west part of the county, has an altitude of 3662.2m; the northeast lowest place, in which the Yingjing River goes out of the territory of the county, has an altitude of 700m. The county covers an area of 1781km², and governs 21 towns and townships, 105 villages. The total population is 153,000 persons (according to statistics up to 2014), and the agricultural population is 102,700 persons. The urbanization rate of the whole county is 38.9%.

located in the southwest of Sichuan Province, middle stream of Dadu River, and intersection of Ya'an City and Liangshan Prefecture and Ganzi Prefecture, Shimian County is an important passage and transition zone from the inland to areas with minority nationalities, such as Yunnan and Tibet, and has been known as "Corridor of nationalities". Shimian County covers an area of 2678km², has the mountain land accounting for 98% of the national territorial area, governs 16 townships and towns, 1 subdistrict office, 92 administrative villages, 8 communities, and total population of 124,400 persons.

The social economic conditions in 7 project districts and counties are shown in Table 2-1.

Table 2-3 Social Economic Conditions in Districts Affected by the Project

	Indicator	Yucheng District	Mingshan District	Lushan County	Tianquan County	Baoxing County	Yingjing County	Shimian County
Population	Total population (10,000 persons)	34.70	28.06	12.23	15.54	5.91	15.30	12.45
	Male (10,000 persons)	17.62	14.36	6.28	8.00	3.06	7.75	6.34
	Female (10,000 persons)	17.08	13.70	5.95	7.54	2.85	7.55	6.11
	Non-agricultural population (10,000 persons)	16.60	4.59	3.83	3.31	1.68	5.04	4.04
	Quantity of labor resources (10,000 persons)	14.97	15.95	7.11	7.76	3.01	8.13	5.81
Cultivated land	Total cultivated area (1,000 hectares)	5.53	9.08	4.37	6.20	1.66	6.29	3.52
	Grain output (10,000 t)	6.11	9.15	4.58	6.84	1.78	4.94	2.73
Output value	Gross domestic product (10 million yuan)	130.11	55.89	29.44	44.18	23.43	56.13	64.45

	Primary industry	Output value (10 million yuan)	14.12	15.61	4.96	6.22	3.06	5.88	4.97
		Proportion	10.85%	27.93%	16.85%	14.08%	13.06%	10.48%	7.71%
	Secondary industry	Output value (10 million yuan)	55.5	25.69	17.96	27.23	16.2	35.34	49.26
		Proportion	42.66%	45.97%	61.01%	61.63%	69.14%	62.96%	76.43%
	the tertiary industry	Output value (10 million yuan)	60.48	14.58	6.6	10.73	4.17	14.91	10.22
		Proportion	46.48%	26.09%	22.42%	24.29%	17.80%	26.56%	15.86%
GDP per capita (Yuan)		36106	21094	25434	32017	40496	37542	50748	
Income	Per capita disposable income of urban residents (yuan)	26715	23425	21909	21875	23217	24100	23020	
	Per capita net income of rural residents	10222	9722	8311	8272	9179	9707	8587	

2.4.2 Social Economic Conditions in Townships and Towns Involved in the Project

This Project relates to 7 districts (counties), including Yucheng District, Mingshan District, Lushan County, Tianquan County, Baoxing County, Shimian County and Yingjing County in Ya'an City. 2 townships are impacted in Yucheng District in Ya'an City, namely, Beijiao Township and Daxing Township; 2 townships are impacted in Mingshan District, namely, Mengyang Town and Chengdong Township; 1 township is impacted in Lushan County, namely, Luyang Town; 1 township is impacted in Tianquan County, namely, Chengxiang Town; 2 townships are impacted in Baoxing County, namely, Muping Town and Lingguan Town; 1 township is impacted in Yingjing County, namely, Fucheng Township; 1 township is impacted in Shimian County, namely, Xinmian Town. The social economic conditions in the affected townships and towns in 7 project districts and counties are shown in Table 2-4.

Table 2-4 Social Economic Conditions in Townships and Towns Affected by the Project

Indicator		Yucheng District		Mingshan District		Lushan County	Tianquan County	Yingjing County	Baoxing County		Shimian County
		Daxing Town	Beijiao Township	Mengyang Town	Chengdong Township	Luyang Town	Chengxiang Town	Fucheng Township	Muping Town	Lingguan Town	Xinmian Town
Villagers group	Administrative village (place)	8	10	14	8	7	17	3	6	12	6
Population	Total number of households (household)	6739	5702	5369	2821	2057	12676	2354	4507	4611	8923
	Total population (10,000 persons)	2.10	1.75	4.06	0.82	2.59	4.86	5399	1.77	2	1.02
Cultivated land	Total cultivated area (10,000 mu)	0.97	0.66	1.10	0.18	0.68	0.73	0.31	/	/	/
Income	Per capita net income of peasants (yuan)	10833	9850	9904	9640	6043	6450	9031	9050	9374	8519

2.4.3 Populations of Affected Villages

Totally, 26 villages and communities are impacted in this Project. 6 villages are impacted in the subproject in Yucheng District, namely, Hongxing Village in Beijiao Township, and Longxi Village, Dayan Village, Shunlu Village, Zhaiping Village and Tianbao Village in Daxing Township; 6 villages are impacted in the subproject in Mingshan District, namely, Jianzhu Village, Zixia Village, Defu Village and Huaixi Village in Mengyang Town, and Pingqiao Village and Yuguang Village in Chengdong

Township; 2 communities are impacted in the subproject in Lushan County, namely, Chengbei Community and Chengdong Community in Luyang Town; 2 villages are impacted in the subproject in Tianquan County, namely, Shaba Village and Huangtong Village in Chengxiang Town; Shunjiang Village and Xinbao Village in Muping Town in Baoxing County, and Shangba Village, Zhongba Village and Lingguan Community are impacted; Nanluoba Village in Fucheng Township is impacted in the subproject in Yingjing County; Shunhe Community, Chengbei Community, Xiangyang Community and Yanzi Community in Xinmian Town are impacted in the subproject in Shimian County. The populations of the villages affected by the project are shown in Table 2-5.

Table 2-5 Populations of Villagers Groups in Villages Affected by the Project

District and County	Township (Town)	Village/Group	Population (person)					Total Labor Forces	Labor Force Outgoing for Work	
			Total Number of Households (Household)	Total Population (person)	Agricultural Population	Proportion of Agricultural Population	Population of Minority Nationalities			
Yucheng District	Daxing Town	Longxi Village	1290	2849	1900	67%	0	800	530	
		Dayan Village	412	1032	876	85%	3	712	212	
		Shunlu Village	851	3000	2095	70%	0	1000	600	
		Zhaiping Village	405	1050	900	86%	0	780	260	
		Tianbao Village	460	1146	1080	94%	0	710	280	
	Beijiao Township	Hongxing Village	611	1887	1100	58%	7	1200	900	
		Subtotal	4029	10964	7951	73%	10	5202	2782	
Mingshan District	Mengyang Town	Jianzhu Village	48	169	3	2%	2	70	30	
		No.1 group								
		Zixia Village	107	217	40	18%	0	110	20	
		No.1 group								
				Defu Village	490	1510	568	38%	2	980
			Huaixi Village	507	1779	874	49%	3	1447	1076
	Chengdong Township		Pingqiao Village	576	1590	980	62%	0	950	400
		Yuguang Village	342	1129	1099	97%	5	678	236	
		Subtotal	2070	6394	3564	56%	12	4235	2512	
Lushan County	Luyang Town	Chengbei Community	1751	5710	0	0%	0	1120	200	
		Chengdong Community	1760	6309	0	0%	0	3000	200	
			Subtotal	3511	12019	0	0%	0	4120	400
Tianquan County	Chengxiang Town	Shaba Village	479	1721	1400	81%	0	980	100	
		Huangtong Village	716	1800	1800	100%	0	1200	200	
			Subtotal	1195	3521	3200	91%	0	2180	300
Yingjing County	Fucheng Township	Nanluoba Village	1464	3238	1437	44%	67	1752	320	
			Subtotal	1464	3238	1437	44%	67	1752	320
Shimian County	Xinmian Town	Shunhe Community	486	1538	493	32%	285	768	275	
		Xiangyang Community	594	1574	178	11.30%	300	786	608	
		Chengbei Community	659	2196	595	27.10%	574	1102	279	
		Yanzi Community	1698	4307	0	0	89	2079	689	
			Subtotal	3437	9615	1266	13.17%	1248	4375	1851
Baoxing County	Muping Town	Xinbao Village	665	1873	1241	66.26%	60	820	48	
		Daheba in Shunjiang Village	27	97	79	81.44%	5	55	10	
	Lingguan Town	Shangba Village	377	1525	1000	65.57%	8	750	25	
		Zhongba Village	423	1386	1260	90.90%	18	880	68	
		Lingguan Community	1782	6560	200	3.05%	200	2806	500	
			Subtotal	3274	11441	3780	33.04%	291	5311	651
		Total	18980	57192	21198	37%	1628	27175	8816	

2.4.4 Situations of Lands in Villages Affected by Land Acquisition

In 26 villager's groups in the project area, 18 villages are impacted by land acquisition, the cultivated area is 13878.53mu, the forestland area is 6527.75mu and the garden area is 6984.02mu. In Dayan Village of Daxing Town in Yucheng District, Jianzhu Village of Mengyang Town in Mingshan District and Yuguang Village of Chengdong Township, the per capita cultivated area is greater than 1mu/person; the per capita cultivated area in Jianzhu Village of Mengyang Town in Mingshan District is the largest, namely, 1.21 mu/person; the per capita cultivated area in Huaixi Village of

Mengyang Town in Mengshan District is the least, only 0.06mu/person. The statistics of lands in villages affected by the project are shown in Table 2-6.

Table 2-6 Statistics of Lands in Villages Affected by Project Land Acquisition

District and County	Township (Town)	Village/Group	Cultivated Area (Mu)	Garden Area (Mu)	Forestland Area (Mu)	Per capita cultivated area (Mu/person)
Yucheng District	Daxing Town	Longxi Village	1540	2000	245	0.54
		Dayan Village	1038	2	0.02	1.01
		Shunlu Village	1800	150	0	0.60
		Zhaiping Village	840	4000	100	0.80
		Tianbao Village	770	0	100	0.67
	Beijiao Township	Hongxing Village	369	700	0	0.20
Subtotal			6357	6852	445.02	
Mingshan District	Mengyang Town	No.1 group in Jianzhu Village	205	0	0	1.21
		No.1 group in Zixia Village	85	0.02	0.01	0.35
		Defu Village	258	480	0.45	
		Huaxi Village	113.09	0	552.22	0.06
	Chengdong Township	Pingqiao Village	580	40	1100	0.36
		Yuguang Village	1160	69	3200	1.03
Subtotal			2401.09	132.02	5332.23	
Lushan County	Luyang Town	Chengbei Community	76	0	0	0.46
		Chengdoing Community	450	0	750	0.69
	Subtotal			686	0	750
Tianquan County	Chengxiang Town	Shaba Village	800	0	0	0.57
		Huangtong Village	2000	0	0.5	0.80
	Subtotal			4800	0	0.5
Yingjing County	Fucheng Township	Nanluoba Village	1292.44	0	0	0.40
Shimian County	Xinmian Town	Shunhe Community	502	0	0.33	

2.4.5 Description of Social Economic Conditions in Investigation Sample

During social economic investigation in this Project, the investigation team has designed the questionnaire. In the investigation sample, male-female ratio is 73.8:26.2, respectively 408 persons and 147persons; 555 sample families totally involve 2249 persons.

Please note that the content of this investigation sample is the same with that in section 2.4.3 of Resettlement Action Plan, because during sampling at that time, the investigation of Resettlement Action Plan only covered the villages and villagers' groups affected by land acquisition, but the sampling scope for Social assessment is larger, not only includes the villages and villagers' groups affected by land acquisition, but also covers the villages and villagers' groups affected indirectly by the project; on the whole, these two scopes are mostly coincided. So the age, gender, educational status, land possession in household have been described in detailed in section 2.4.3 of Resettlement Action Plan, so here no more unnecessary details are given.

In this time, the particular attention is paid to the economic incomes and expenditures in the investigation sample; see Table 2-7 for details. Seen from the following table, the project area is located in the city district or perimeter of the city district, where some residents no longer make a living mainly on the land; in the family economic activities, doing work for others is the main source of income. In the expenditure of households, the family living expenses are the major part.

Table 2-7 Summary of Family Income and Expenditures in Project Investigation Sample

Project District and County	Quantity of Family (Household)	Family Size (Person)	Family Income per Household (Yuan/year)					Expenditures per Household (Yuan/year)								
			Total	Agricultural Income	Proportion	Non-agricultural Income	Proportion	Total	Agricultural Expenditures	Proportion	Living Expenses	Proportion	Medical Expenses	Proportion	Educational Expenses	Proportion
Yucheng District	120	564	63720	11040	17.33%	52680	82.67%	37088	7300	19.68%	24665	66.5%	2923	7.88%	2200	5.94%
Mingshan District	42	135	54300	8200	15%	46100	85%	46500	2176	4.68%	32318	69.5%	4738	10.19%	7268	15.63%
Baoxing County	70	315	34900	10819	31%	24081	69%	25660	826	3.22%	19383	75.54%	3074	11.98%	2427	9.46%
Lushan County	60	262	58600	7980	13.62%	50620	86.38%	35560	2000	5.62%	25440	71.34%	3100	8.72%	5020	14.32%
Tianquan County	60	265	47500	15675	33%	31825	67%	34916	977	2.8%	22695	65%	4189	12%	7053	20.2%
Yingjing County	24	81	72862	4030	5.53%	68832	94.47%	41921	2859	6.82%	26783	63.89%	5252	12.53%	6988	16.67%
Shimian County	179	627	74908	5678	7.5%	69230	92.42%	45490	2459	5.4%	32901	72.3%	2600	5.7%	7530	16.55%

In 555 families investigated, the family annual income per household is 61068 yuan, among them, the agricultural income per household is 8935 yuan, accounting for 14.63 %, the non-agricultural income per household is 52133 yuan, accounting for about 85.37% of total income.

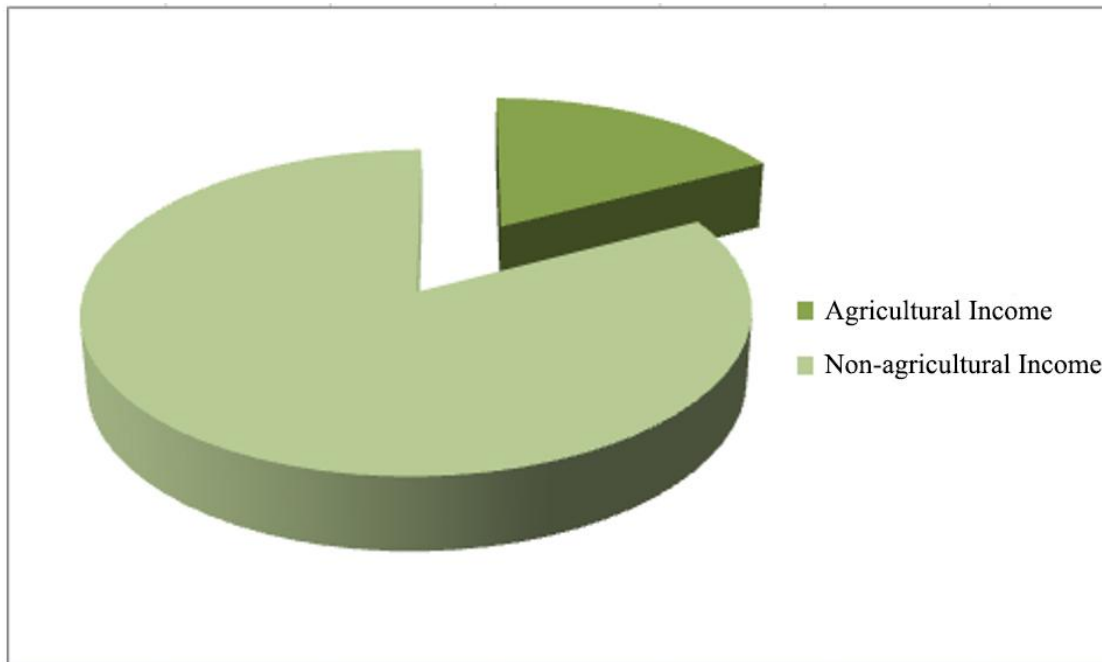


Figure 2-4 Proportion of Sources of Family Annual Income in Investigation Sample

In 555 families investigated, the family annual expenditures per household is 38883 yuan, among them, the agricultural expenditures are 3086 yuan, accounting for 7.94%, the living expenses are 27197 yuan, accounting for about 69.95%, medical expenses are 3232 yuan, accounting for about 8.31%, educational expenses are 5368 yuan, accounting for about 13.8%.

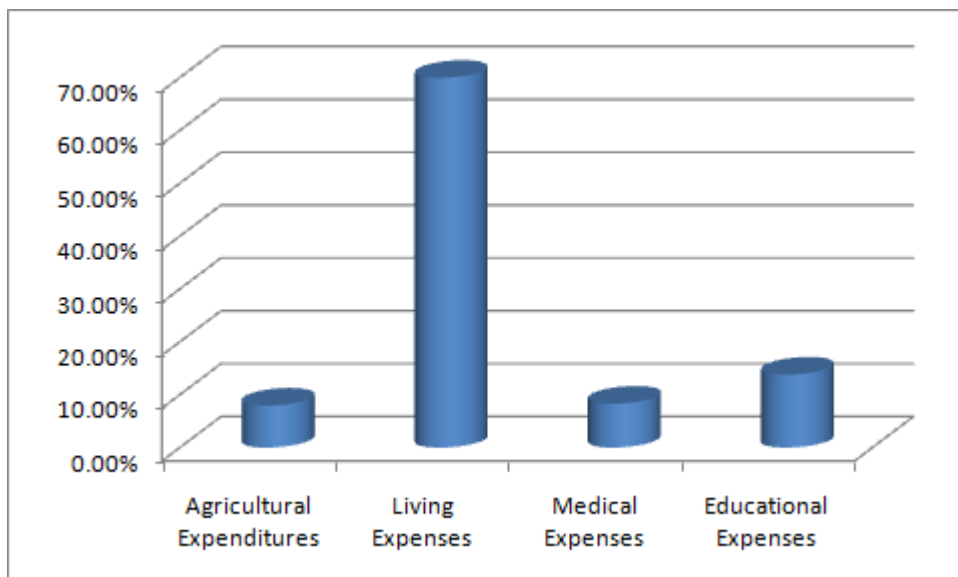


Figure 2-5 Proportion of Family Annual Expenditures in Investigation Sample

2.5 Investigation of Women Development in the Project Area

2.5.1 Distribution of Women in the Project Area

In 7 districts and counties affected by the project, the total population is 1,241,900 persons, among them, the quantity of women is 607,800 persons, accounting for

48.94%. The proportions of women in districts and counties are basically average, wherein, the proportion of women in Yucheng District is largest, accounting 49.22%, the proportion of women in Baoxing County is lowest, accounting for 48.22%.

Table 2-8 Summary of Distributions of Women in Districts and Counties in the Project

Indicator	Yucheng District	Mingshan District	Lushan County	Tianquan County	Baoxing County	Yingjing County	Shimian County	Total
Total population (10,000 persons)	34.70	28.06	12.23	15.54	5.91	15.30	12.45	124.19
Male (10,000 persons)	17.62	14.36	6.28	8.00	3.06	7.75	6.34	63.41
Female (10,000 persons)	17.08	13.70	5.95	7.54	2.85	7.55	6.11	60.78
Proportion of women (%)	49.22%	48.82%	48.65%	48.52%	48.22%	49.35%	49.08%	48.94%

2.5.2 Degree of Participation of Women in Economic Activities in Project Area

As for women development in area affected by the project, the degree of participation in social and economic activities and right to speak in community and family affairs may be provided for investigation. By use of questionnaire data, we can know the related information.

Firstly, various local governments pay great attention to the women development. During investigation in Women's Federation, the project team found that there are many measures to support women development in localities, and the training of ability of cadres in Women's Federation to perform duties, women development and entrepreneurial skills training and training for flexible employment of women living at home are often carried out. The training system for women to begin an undertaking shall be created and perfected, so as to improve the quality of training for beginning an undertaking; in combination with demands of post-disaster restoration and reconstruction and advantageous projects in Yucheng District, the training model and training technique for different objects shall be explored, the training and allocation of teachers shall be enhanced, and the women's flexible employment ability and success rate to begin an undertaking shall be strengthened.

In villages and communities investigated in all 7 districts and counties in the project, the number of 20-30-year-old women with full-time work for others occupies 65% of total number of women in this age group, the number of 30-40-year-old women with full-time work outside occupies 58% of total number of women in this age group, and the proportion of women with occasional work outside is 22%. A large portion of women over 40 years old are engaged in agriculture at home and take care of their children; the number of 40-50-year-old women being engaged in agriculture at home occupies 27% of total number of women in this age group, the number of women over 50 years old being engaged in agriculture at home occupies 46% of total number of women in this age group.

Looking from age distribution, the degree of participation of woman under 20-30 years old in social economic activities is the highest. After 30 years old, due to such reasons as children-rearing, family-caring, etc., the proportion of women with full-time work outside reduces, which creates a certain number of stay-at-home

women in villages.

Table 2-9 Summary of Economic Activities of Women in Districts and Counties in the Project

Age Grades	Full-time Work (%)	Occasional Work (%)	Engagement in Agriculture at Home (%)	Completely No Working (%)
20-30	65	20	12	3
30-40	58	22	17	3
40-50	30	35	27	8
Over 50	14	21	46	19

2.5.2 Degree of Participation of Women in Political Activities in Project Area

By way of investigation of women employment and supporting issues, the women investigated in the project area think widely that the low culture level and domestic affairs are the main factors hindering them from employment. One sorority director is arranged in the community, and the supporting policies for relevant disadvantaged women (e.g., basic living allowances, training, etc.) are established; women express that they are able to and willing to participate in the determination of public affairs in the community. More than half of women indicate that they have participated in the villagers' representative assembly or discussion of other community public affairs. This shows that the special attention is paid to the right of local women to speak.

2.5.3 Analysis of Demands of Women Development

I. Demands for job opportunities

The field investigation shows that the female respondents would prefer to get these job opportunities in comparison with male respondents. Because the rural women must do housework and cannot work outside for long time. The construction sites in these projects are very near apart from their domiciles, and the working time is relatively fixed, they hope to acquire these job opportunities. The local women hope that the project promotes the development of local industrial enterprises so to create more employment opportunities. Therefore, more persons can be employed locally, and the women can make their choice from more non-agricultural works, the male laborers can often go back home when they are working outside, thereby reducing the housework burdens of women and promoting the family harmony.

II. Demands for traffic safety facilities

In a local family, most male laborers go outside for work, and the women are mainly engaged in picking up and dropping off the children for school or the old men for seeing a doctor, so the local women really are concerned about the issues of traffic safety facilities. The female respondents think that almost no traffic signals and zebra markings are arranged nearby the village, the safety signs and road signs are generally arranged in an irrational way, and no road signs can be seen often.

III. Traffic safety and environment in operation period

After completion of road subproject, more vehicles certainly will go through with higher speed, which threatens the safety of local residents, especially children and old persons. For ensuring the traffic safety of children, the family members, especially women and old persons must send the children to school and pick up them from school, which undoubtedly increases the housework burdens of the women. The women really hope that the training and propaganda of traffic safety for drivers, residents and students be enhanced in various ways. Meantime, the

women hope that the traffic regulation be strengthened and the noise and dust pollution be reduced. Many trucks go through the proposed road to create loud noise flying dust, which not only causes the inconvenience to the people, but also increases the work loads of women. The female respondents think that more and more vehicles go through these roads after completion of the project, so they hope to strengthen traffic regulation, reduce flying dust and whistling noise, especially around the school and in the evening.

IV. Arrangement of bus stops

According to the project investigation, the public transport in the project area is not well developed, and the number of runs of scheduled buses is less. The local residents hope to increase the number of public buses, and that the benches and canopy should be taken into consideration during design of bus stops.

2.6 Investigation of Modes of Communications and Transportation in Project Area

2.6.1 Basically Formed Road Traffic Network in Project Area

According to field investigation, the seven districts and counties in this Project possess the basically completed traffic network.

I. External traffic in the project area

As for external traffic, the traffic conditions in Yucheng District, Mingshan District and Shimian County are better. Because Yucheng District and Mingshan districts are close to Ya'an City, and the Yaxi Expressway exists in Shimian County. Shimian County and Yucheng District are used as the example here. In Yucheng District which is the central urban area of Ya'an City, the main passages for external traffic include Chengdu-Ya'an Expressway, Yaxi Expressway, Ya'an-Leshan Expressway, Ya'an-Kangding G318, Ya'an-Xichang G108, Ya'an-Leshan S305, and several county-level roads from central urban area to Bifeng Gorge northward. Among them, Chengdu-Ya'an Expressway has 4 exits, respectively in south of central area of Mingshan District, north of Yaoqiao District, Beijiao and west of old city district. Ya'an-Leshan Expressway has 1 exit in east of Caoba. Ya'an-Kangding Expressway under construction is planned to be opened for traffic in 2017, and has 2 exits respectively in Daxing and south of old city district. The external traffic in Shimian County mainly relies on Yaxi Expressway, National highway No.108, Provincial highway No.211 and Shijiu Road, among them, a service interchange is arranged in Chuanxindian Group in the central urban area for Yaxi Expressway; Yaxi Expressway and national highway No.108 are mainly connected with Ya'an, Chengdu, Xichang and Panzhihua; the provincial highway No.211 is mainly connected with towns and townships in north of the county, Luding and Ganluo; Shijiu Road is mainly connected with Jiulong in Ganzi prefecture.

As for external traffic in other districts and counties, the road network is complete, but inconvenient, in addition, the roads are damaged seriously after earthquake, and the works for road rehabilitation will often create the traffic jam. By taking Baoxing County as an example here, currently the provincial highway No.210 passes through the entire territory of Baoxing County and is the only external connecting passage in the county, thus has larger traffic pressure. The Shunshan Road, Zhongling Road, Xinqiao Street east and Xinqiao Street west in the project for Wenchuan post-earthquake reconstruction form a net structure. Most roads are relatively narrow, and the pavements are damaged seriously due to overload transportation, lack of maintenance and "4.20" Lushan earthquake,

which has greatly impacted the movement of vehicles and overall urban environment.

II. Internal traffic in the project area

As for internal traffic, various districts and counties in the project have the complete road network, but the existing roads are narrow, the pavements are damaged, the public facilities are backward, and the traffic is often jam. Here Yucheng District and Yingjing County are taken as the example.

The central urban area of Ya'an City includes the old city district, Yaoqiao District and Daxing District. The old city district has the relative complete road network, but the large density of population and serious jam traffic situations; the urban land has been saturated in this district, so Ya'an City government plans to move the city center eastwards, intensify the construction of Yaoqiao District and Daxing District so as to share the population and traffic pressures in the old city district. The municipal construction in Yaoqiao District has been completed basically, and includes three major roads from south to north, namely, Xiongmao Avenue, Yazhou Avenue, northern external ring road, etc., which makes the internal traffic convenient; such main functional government departments as Ya'an City Government, Yucheng District Government, etc. have already been moved into Yaoqiao District. The construction of Daxing District just starts up, various municipal infrastructures are backward, the skeleton road network is not formed yet in the district, and only Yahe road as a main passage passes through the district.

The road network structure in a checkering form in the old city district of Yingjing County has already been taken shape, and is integrated with some free-style roads; the major trunk roads include Yingxing Road, Kangning Road, Jianshe Road, Shicai Road, Zitonggong Street, Fanrong Street and Xinnan Street. In the comprehensive functional group in Fucheng, the roads include national highway No.108 (urban through traffic section), Fuyu Road and Pingxi River Bridge to Wuxian Township and some scattered small paths; the road network structure is not perfect, and no secondary trunk roads and feeder road system exist basically, which needs to be planned for construction urgently. In the old district of Yingjing County town, the road network is basically formed, but the road networks in Fucheng comprehensive functional group, Northern and Western Districts are still in the stage of planning and construction; especially in Fucheng District, the existing road network is not capable of satisfying the needs of resettlement quarter construction and transportation of school, hospital and residents and so on; the connecting roads between district and group need to be improved urgently. Currently, the main traffic type in Fucheng District is through traffic, but the school, hospital and peripheral resettlement quarter are distributed in the district, the through traffic and internal traffic are mixed, which has big hidden danger.

2.6.2 Widely Undeveloped Public Transport in the Project Area

According to the project investigation, the public transport in the project area is not well developed, the number of runs of scheduled buses is less, and in some districts and counties the tricycles are used as the taxi. Here Yucheng District and Lushan County are taken as the example.

In Yucheng District as central urban area of Ya'an City, 6 bus routes with a total number of 56 buses are arranged currently, and there are not dedicated parking lots

and bus departure stations. Currently, there are 221 taxis in Ya'an City, and the possession rate per 10,000 persons is 9, which is low level in comparison with that of the similar city.

At present, the traffic type in Lushan County town includes walk, cars and pedicabs. The public transport is developing a little bit slowly, the bus stops are mainly distributed along the Yingbin Avenue, the bus actual load rate is lower, and so is the bus sharing ratio. The traffic jam mainly occurs in the old city district - Lushan County town; especially the people in the old city district go out mainly by use of motorcycles and pedicabs, the dedicated non-motor vehicle carriageways are not arranged in the most roads in the county town, in addition, parking on both sides of road is very serious, thereby creating the potential safety hazard for movement of non-motorized vehicles; the people walk basically on the footpaths with small width at both sides of the road, the roadside stall business is popular, no footpaths are arranged on some streets in the old city district, and the persons and vehicles commonly use the road together.

III. Lack of parking lots in city district

In recent years, the car ownership in the project area is growing continuously, the proportion of motorcycle and pedicab in residents' trip is also large. At present, the motorcycles, pedicabs and non-motorized vehicles are parked together in the central urban area, no dedicated parking lots are arranged, the demands for parking facilities are large; on the other hand, the buildings built in early days basically are not arranged with the parking facilities, and the parking lots in the buildings built newly in recent years are not in accordance with the standard parking requirement, and are lack of parking facilities, a large number of vehicles occupy the resources inside the roads, therefore, the supply and demand structure is unbalanced, no special parking planning is made, and the off-road public parking lots are deficient seriously. For example, in Lushan County and Tianquan County, because the post-earthquake restoration and reconstruction works are carried out synchronously, many construction sites are distributed on both sides of the road, which results in frequent traffic jam and occupation of parking space.

But in Yucheng District with more parking spaces, although the parking spaces are planned, the effect is limited. Currently, in Yucheng District as the central urban area of Ya'an City, the parking lots with temporary road blockade by use of existing road planning in city district trend to saturation and have about 1670 parking spaces, the internal or underground parking lots in hotels and guest houses have about 300 parking spaces, but the number of parking spaces able to be provided for public parking is limited; other parking lots opening to the outside (e.g., Salt company, Caigenxiang underground parking lots, Wenzhou shopping mall, holiday piazza, Dsan electric appliances, etc.) have about more than 200 parking spaces, but the number of actually parked vehicles is well lower than the number of available parking spaces, thus the utilization ratio is very low.

IV. Going-out mode of local residents

According to the investigation results, various municipal infrastructures in the project area are relatively backward, the local residents are dissatisfied at current traffic conditions; firstly, the roads are narrow, secondly, many post-disaster reconstruction works are carried out, and many large-sized trucks go through, which results in traffic jam and makes the roads damaged seriously. However, the proposed projects are located basically in the urban area or the perimeter of urban area, the complete road network in villages can meet the needs of resident trip.

Table 2-10 Statistics of Roads in Affected Villagers Groups in Project Districts and Counties

District and County	Villagers group		Asphalt Road		Concrete Road		Earth Road		Possession of Complete Road Network
			Kilometers	Proportion	Kilometers	Proportion	Kilometers	Proportion	
Mingshan District	Chengdong Township	No.2 Group in Pingqiao Village	1km	50%	1km	50%	0	0	Yes
		No.3 Group in Pingqiao Village	0.5km	50%	0.5km	50%	0	0	Yes
		No.5 Group in Pingqiao Village	1.5km	48%	1.1km	35%	0.5km	16%	Yes
		No.4 Group in Yuguang Village	1km	34.4%	0	0	1.9km	65.6%	Yes
	Mengyang Town	No.1 Group in Jianzhu Village	3km	70%	2km	30%	0	0	Yes
		No.1 Group in Zixia Village	0	0	5km	62.5%	3km	32.5%	Yes
		No.4 Group in Defu Village	0	0	3km	100%	0	0	Yes
		Huaixi Village	0	0	4.2km	80%	1km	20%	Yes
Shimian County	Xinmian Town	Chengbei Community	4km	60.6%	0.6km	9.1%	2km	30.3%	Yes
		Xiangyang Community	6km	66.7%	2km	22.2%	1km	11.1%	Yes
		Shunhe Community	1km	25%	2km	50%	1km	25%	Yes
		Yanzi Community	2km	21.1%	4.5km	47.4%	3km	31.6%	Yes
Yingjing County	Fucheng Township	Nanluoba Village	4km	19%	0.6km	71%	2km	8%	Yes
Yucheng District	Daxing Town	Longxi Village	0	0	14km	82.4%	3km	17.6%	Yes
		Dayan Village	0	0	5km	38.5%	8km	61.5%	Yes
		Shunlu Village	0	0	3km	35%	8km	65%	Yes
		Zhaiping Village	0	0	4km	33.3	8km	66.7%	Yes
		Tianbao Village	0	0	12km	90.2%	1.3km	9.8%	Yes
	Beijiao Township	Hongxing Village	2km	44.4%	1.5km	33.3%	1km	22.2%	Yes
Tianquan County	Chengxiang Town	Shaba Village	3km	27%	5km	45%	3	38%	Yes
		Huangtong Village	2km	25%	4km	50%	2	25%	Yes
Lushan County	Luyang Town	Chengdoing Community	2km	33%	2	33%	2	33%	Yes
		Chengbei Community	5km	50%	5	50%	0	0	Yes
Baoping County	Muping Town	Xinbao Village	7km	41.2%	10km	58.8%	0	0	Yes
		Daheba in Shunjiang Village	3km	55%	2.5km	45%	0	0	Yes
	Lingguan Town	Shangba Village	2km	28.6%	4km	57.1%	1km	14.3%	Yes
		Zhongba Village	1.5km	25%	3.5km	58.3%	1km	16.6	Yes
		Lingguan Community	9km	100%	0	0	0	0	Yes

In this time, the project team has carried out the investigation of resident trip in the area affected by the project; the resident trips in various counties are different, and shown summarily in the following table:

Table 2-11 Summary of Resident Trip Modes in Sample Communities in Districts and Counties in Subprojects

Type of means of transportation	Use Ratio of Means of transportation						
	Mingshan District	Lushan County	Baoxing County	Tianquan County	Shimian County	Yingjing County	Yucheng District
Bus	0	5%	10%	0	25%	2%	13%
Motorcycle (including motor tricycle)	40%	47%	45%	52%	52%	75%	40%
Bicycle	20%	0	0	0	0	1%	0
Electromobile	25%	38%	35%	36%	13%	16%	35%
Private car	15%	10%	10%	12%	10%	6%	12%
Total	100%	100%	100%	100%	100%	100%	100%

2.7 Investigation of Current Situations of Disaster Prevention and Reduction in Project Area

2.7.1 Deficient Emergency Refuges and Emergency Escaping Passages

According to field investigation, the emergency refuges in the project districts and counties are deficient; at present, the refuges include basically such public facilities as squares, green belts, parks, schools, etc. However, according to density of population in the project districts and counties at present, these refuges cannot satisfy the emergency refuting needs. Here Yucheng District and Baoxing County are used as the example for description.

The emergency refuges are arranged inside the urban area of Ya'an City, and the local government has already included the construction of emergency refuge construction into the urban and rural construction plans, so as to better implement the emergency refuge construction in accordance with local conditions and in combination with such public facilities as squares, green belts, parks, schools, stadium, etc., and make overall arrangements of equipment and facilities necessary for traffic, water supply, power supply, environmental protection, resource reservation, etc. of refuges. The densely populated places shall be arranged with emergency evacuation passages and provided with necessary rescuing and refuting facilities. Currently, 121 emergency refuges of all kinds are arranged in the whole city. But the density of population in the old city district is large, the refuges are deficient, especially in the towns around the old city district, so in case of occurrence of disaster, no sufficient refuges can be used for the masses; in Daxing District, only Yahe Road is connected with the outside, and the evacuation passages are deficient, thus, the masses cannot be moved to the safe place for resettlement in case of occurrence of disaster, due to which the potential safety hazards exist.

In "4.20" Lushan Earthquake, the municipal public infrastructures, such as roads, bridges, etc., in Baoxing District have been damaged in varying degrees, and almost all roads by mountains are interrupted due to damages, which results in great losses of economic and social development of Baoxing County town. Due to geographic limitations of Baoxing County, at the time of disaster, the masses go to the only anti-disaster access in the county, Riverside Road, for seeking refuge, which results in serious stoppage of large numbers of rescue vehicles and apparatuses on the road due to lack in necessary transferring roads during subsequent earthquake relief works, thereby seriously influencing the execution of earthquake relief works. The earthquake relief works highlights the imperfection of emergency evacuation system of Baoxing County, which is mainly manifested by single emergency evacuation passages and imperfect emergency evacuation road system; see Figure 2-5 for details. According to Baoxing County planning, an emergency system taking Red Army Square and Hainan Middle School as long-term refuge squares and parks, parking lots, green belts and primary schools as temporary refuge squares will be established. However, the current supporting emergency evacuation passages (especially external passages) are all single relatively, the provincial highway No.210 (Riverside Road and Jiajinshan Road in the urban area) is still the only disaster relief and evacuation passage in the county town, and easily suffers the serious traffic jam, thereby results in the huge impact on emergency rescue works.



Figure 2-5 Residents Seeking Refuge by the Road in Baoxing County During Lushan Earthquake

2.7.2 Investigation of Disaster Relief Commanding System and Emergency Plan

I. Earthquake relief commanding system

During Lushan earthquake relief works, the earthquake and disaster-relief headquarter, in which the secretary of the municipal party committee and mayor are commanders and other leaders of the municipal party committee and government are deputy commanders, is established in Ya'an City, and governs 15 working teams and 8 county-level guidance teams, as well as mass work teams; the head of the army innovatively holds the concurrent post of the resident deputy secretary of the village party branch or township party committee so as to realize the unified leadership of the troops and locality, thereby providing the strong organizational guarantee for earthquake relief works.

According to information obtained by the project team from the Ya'an City Emergency Response Office, a relatively complete local emergency plan for sudden public events has been prepared. For instance, *General Emergency Response Plan for Sudden Public Events of Ya'an City People's Government* (revised version, 2014) has been printed and issued by Ya'an City People's Government in 2014. Four types of sudden public events, such as natural disaster, accident disaster, public health event and social security event, are defined in this document.

This plan integrates the existing resources for response to sudden public events, such as organizational management institution, information, etc., establishes the system and mechanism of preventing, commanding and handling of sudden public events. By way of standardizing the grade classification of sudden public events, the starting procedures of sudden public events with different classes are determined, the responsibilities and authorities of the people's governments and functional government departments of townships are defined, so as to realize the systematic prevention, scientific decision-making, intelligent command and

coordinative guarantee, thereby further improving the coping capacity of sudden public events.

Meanwhile, according to the project investigation results, seven districts and counties in the project all have the general emergency plan and special emergency plan for various disasters.

2.7.3 Investigation of Current Situations of Flood Control

In the proposed project, the works for construction of flood control embankment are carried out in three areas, including Mingshan District, Shimian County and Yingjing County. Therefore, the flood control situations in these three areas are mainly investigated in this section.

I. Current situation of embankment in Mingshan District

The implementation section of Huaixi River for proposed embankment project is located in the southwest direction of the planned scope of Mingshan District, namely, tributary on the right bank of Mingshan River, and mainly used for discharge of water from Mengding Mountain. The resettlement quarters are mainly located on both banks of the river course, and no flood control embankment is constructed yet currently. There is no observational data for this river, and no planning is made for the river course. According to on-site visit, the residents nearby the river have no impression of flood disasters of Huaixi River in the history.

The implementation section of Mingshan River for the proposed embankment project is located in the northernmost part of planned scope of Mingshan District, pertains to the upstream of Mingshan River; the farmlands and nursery gardens are mainly distributed on the right bank of the river, and many private houses and enterprises are located on the left bank of the river. As for current situations, no flood control embankments are constructed on both banks of the river, but the natural slopes; the existing footpaths in some parts of the river course have certain influence on flood discharge. According to on-site visits to residents nearby the river, the flood submerged the banks once in this region, but the data about year of occurrence and losses caused due to flood are unavailable.



Figure 2-6 Current Situations of Mingshan River and Huaixi River

II. Current situation of flood control embankment in Shimian County

So far, most river courses in the central urban area of Shimian County haven't been arranged with flood control facilities (such as Chengbei District, Yanzi District, Shunhe District, Guangyuanbao District, Caobapai District, Xiangyang District, etc.), and the entire stream reach cannot form a complete flood control system. The embankment project in Yanzi District in Shimian County is completed according to a standard of once-in-20-year flood, and the foundation

treatment hasn't been carried out for the previous embankments, which results in the frequent occurrence of dangerous case. The urban flood control standard in Shimian County is for once-in-50-year flood, and the previous embankments are not in accordance with this standard. By way of reconstruction of river course in this Project, the flood control standard will be increased from once-in-20-year flood to once-in-50-year flood. The flood control standard of embankments already constructed in the upstream and downstream and to be connected with new embankment in this time is for once-in-50-year flood. Thus, the weak embankment in Yanzi District will be well improved. Improving the flood control capability of Shimian County town can also continuously perfect the entire flood control system of Shimian County.



Figure 2-7 Current Situation of Flood Control Embankment in Shimian County

III. Current situation of Flood Drainage Canal in Yingjing County

The flood control and drainage are also the constituent part of the disaster prevention and reduction system; although the flood control system in Yingjing County town has already been completed basically, no roads have been constructed by some flood control embankments, and the rescue vehicles cannot reach the disaster location quickly in case of occurrence of flood damage; therefore, the construction of emergency passage on flood control embankment is very necessary, and the roads in west section of Jinghe Road in this Project belong to the emergency passage. The flood control and drainage in the old city district of Yingjing County mainly rely on three canals distributed in the city district, namely, Qingzhuxi, Qianjiagou, diversion canal of Kaishansi Power Plant. In history, the depth of accumulated water due to inland inundation in Yingjing County is about 1m. The area of accumulated water is over 1500mu (Qingzhuxi, Qianjiagou and Xijiaogou). In this Project, the flood drainage canal works are located in the high-risk inland inundation area. Currently, the flood drainage canals are filled with garbages and sludge, which seriously affects the normal function of the flood drainage canal. The implementation of this Project can reduce the occurrence of inland inundation effectively, and lead the mountain torrents into Ying River, so as to reduce the damages to national properties, residents' lives and properties along the river by the flood.

2.7.4 Investigation of Disaster Prevention Awareness

The multi-level and multi-type emergency drills are carried out generally every year in Ya'an City; the earthquake evacuation drills in towns, townships, primary and middle schools, hospitals and population habitats have become the normalized works; such professional teams as public security, armed police, fire control, militia and reserves continuously carry out the regular drills and practices. During "the 12th Five-Year Plan", various emergency drills in 6375 times have been carried out in the whole city,

and 720,000 persons (times) have participated in these drills. Meantime, Ya'an City People's Government has prepared, printed and issued documents of laws and regulations about earthquake prevention and disaster reduction, reading books and picture albums about knowledge of earthquake prevention and disaster reduction in 1,400,000 books (booklets) freely to the citizens; 37 earthquake prevention and disaster reduction demonstration schools and 21 demonstration communities and 13 residents' safety demonstration villages in municipal level or above have been established, among them, Muping Community in Baoxing County has been awarded as National Level Earthquake Safety Demonstration Community.

During investigation, the project team found that all villages (communities) investigated have their own emergency plans, and have organized the residents for earthquake emergency drills with frequency of 1-2 times every year. At the same time, according to statistics of door-to-door questionnaires, all respondents know the correct escaping way in case of occurrence of earthquake, and the respondents over 95% have participated in the professional earthquake safety education.

3. Identification of Stakeholders and Social Suitability

3.1 Stakeholders and Their Appeals

Totally 5 kinds of stakeholders are identified in the Project, i.e., the governmental agencies, the Owner, the affected people, the residents nearby (including 40% affected population, women and minorities) and enterprises in the affected area.

1. Governmental agencies

- (1) Governmental agencies and functional departments at all levels can participate in the management of the Project through administrative, legal and economic means, and play the coordinating and service role in different construction stages of the Project. Their support is critical to the construction of the Project.

In a word, impact of the Project to the governmental agencies and related functional departments is positive. The only approach to actually facilitate and guarantee the smooth planning and approval of the Project is to make decisions in a scientific and democratic way during the planning and preparation stage. In addition, it is a must to guarantee the legal compliance and effective implementation of policies concerning the Project during the implementation of the same.

As for the strength of impact of the Project to social stability, the Project has the strongest impact to departments engaged in Project approval, land requisition and demolition, environmental impact and those contacting directly with the affected population. Departments undertaking coordinating and service roles in the Project are influenced most seriously.

- (2) As for the Project, the appeals of governmental agencies are as follows: As an important participant in the Project, the fundamental interests of the government is to finish the Project successfully and as soon as possible and take the Project as an opportunity to improve local infrastructure, promote employment, improve environment for investment and facilitate development of local economy. Construction of the Project will help facilitate the enhancement of administrative and service quality of local governmental. However, since local government lacks professional skills required to implement the Project, advices and assistance from professional advisory agencies and professional implementing organizations are necessary.

Table 3-1 Analysis on Governmental Agencies

Stakeholder	Project Function	Project Impact (Positive “+” or negative “-“)	Interest Appeals
Governmental agencies and functional departments	The World Bank loan Owner office will be set up at all levels of related government agencies to organize, coordinate and control the World Bank loaned project and decompose related responsibilities to functional departments; to plan, research and make decisions, to provide some capital for construction of the Project.	(+)	Hope to finish construction the Project as early as possible to improve local infrastructure, improve environment for investment, enhance administrative service quality of local government and facilitate local economic growth and income increase; the Project will bring better facilities and conditions to stand or relieve disaster.

2. Owner of the Project

The Project Owner is the also the organization planning and implementing the Project and it plays a critical role in the Project. Sub-owners including Ya’an Urban-rural Construction and Housing Security Bureau and the Urban-rural Construction and Housing Security Bureau of Mingshan District, Lushan County, Tianquan County, Baoxing County, Yingjing County and Shimian County.

Table 3-2 Analysis on the Project Owner

Stakeholder	Project Function	Project Impact (Positive “+” or negative “-“)	Interest Appeals
Project Owner	Raise fund for the project and build the same; organize and coordinate work between local government and the constructor; manage the world bank loaned project.	(+)	Hope to finish construction of the project as soon as possible to improve local infrastructure and the environment for investment

3. Affected people of the Project

Affected people arising of the Project are population directly affected by the Project and their attitude toward the Project depends greatly on the impact of the Project to them. The Project involves in land requisition and demolition, in big amount.

Appeals of affected people here are mainly that the government can push forward land requisition and demolition according to stipulated standards and policies and make reasonable compensation and resettlement to the affected people. As for compensation and resettlement, most of affected people prefer social-security-based resettlement so that to improve the life. Local residents are relatively satisfactory at the compensation standards and policies concerning land requisition and demolition.

Table 3-3 Analysis on Affected people of the Project

Stakeholder	Related to the Project by	Project Impact (Positive "+" or negative "-")	Interest Appeals
Emigrants	Accept land requisition and resettlement	(+) (-)	Get reasonable compensation for land requisition and guarantee on livelihood recovery after losing the land

4. Residents nearby

Completion of the Project enables the residents nearby to enjoy more convenient traffic. These residents are expecting the increase of their land and houses price, more employment and income increase.

Appeals of these affected residents are that the Project can be built up as soon as possible so that to make convenience to their life, facilitate development of regional economy and bring about convenient traffic. They hope also that the noise, dust, traffic jamming and other adverse impact brought by the Project during the construction stage can be cut down.

These residents contain also the 40% bottom income group, women and other disadvantaged groups under special attention of the World Bank. In conventional sense, the disadvantaged group refers to the disabled, the households living with the minimum living guarantee and the households living with the five guarantees. The World Bank is interested in whether the local government has provided aids to the disadvantaged groups including the disabled, the households living with the minimum living guarantee or the five guarantees, what about the effects of such aids and what impacts will be incurred to the disadvantaged groups living on the land directly affected by the Project.

Women are another special group under the attention of World Bank which wants to know the impact of the Project to women living on the land directly affected by the Project. Thus, it is required to survey on the participation of women living on the affected land in local economic activities and neighborhood management activities and analyze the impact of the Project to them.

It is found by field survey that the 40% bottom income group and women living on the affected area have the same traveling means with their neighbors. The only difference is that women are more responsible to accompany their children on the way to the school or home and thus they are expecting more on the traffic safety. Interest appeals of these 40% bottom income group and women are that the local government can provide more aids to households living with the minimum living guarantee or the five guarantees on the affected land, during construction of the Project and more local employment can be provided to women because they need both economic benefit in certain degree and the convenience to take care of their family.

Table 3-4 Analysis on the residents nearby

Stakeholder	Related to the Project by	Project Impact (Positive “+” or negative “-“)	Interest Appeals
Nearby residents indirectly affected by the Project	Suffer from inconvenience or noise resulted during construction of the Project; employment, infrastructure improvement and life convenience brought by the Project	(+) (-)	the Project can be finished a.s.a.p, certain employments can be offered during and after construction of the Project; more economic benefits and traffic convenience; better facilities and conditions to stand or relieve disaster and more importance to traffic safety after completion of the Project

5. Enterprises and Stores Affected by the Project

Table 3-5 Analysis on local enterprises

Stakeholder	Related to the Project by	Project Impact (Positive “+” or negative “-“)	Interest Appeals
Local enterprises	The Project influences the development of local enterprises positively and may bring certain benefits and opportunities for the development of the same.	(+) (-)	Improve the environment for investment; get preferential policies from the government to push forward enterprise development

3.2 Mutual Adaptability of the Project and Its Stakeholders

3.2.1 The Project satisfies *the Overall Post-earthquake Reconstruction Planning of Lushan*

The M7.0 violent earthquake in Lushan has resulted in severe loss of both life and wealth to the people living there. On July 6, 2013, the State Council released *the Overall Post-earthquake Reconstruction Planning of Lushan* and required local governments at all levels and institutions directly subordinated to the Central Government to fully carry out the post-earthquake reconstruction according to such planning and the actual disaster situation. It is defined in the said planning that:

Ya’an downtown (Yucheng District and Mingshan District), as a regional central city in the western Sichuan Province, to play the advantages of mature service function and strong influence to take over population transfer and industrial development and act the core region for social and economic development of the earthquake-stricken area; to push forward restoration and development of key towns of Lushan, Tianquan, Yingjing and Baoxing (Muping and Lingguan included) counties and strengthen their function to gather people and industries and finally build them into key areas for economic development of the county.

Key towns shall be identified. To strength construction of Ya’an downtown, optimize spatial arrangement, make perfect urban infrastructure and enhance comprehensive carrying capability of the city; to push forward the old town reconstruction experiment of Lushan County and design urban functions rationally to facilitate the cultural, tourism, trading and logistics industries; to strengthen prevention and control against geological disasters in Baoxing downtown and disable some functions as appropriate; to reinforce old town reconstruction of Tianquan downtown and improve functions; to make use of the industrial advantages of Yingjing downtown to push forward industry

agglomeration and development.

As for urban infrastructure, the principle of “underground first and then ground” shall be followed to push forward restoration and reconstruction of urban infrastructure facilities. Water and gas supply and urban roads and bridges will be restored firstly to make perfect the water drainage, power, TV and radio, fire facilities and the harmless and resourceful processing facilities for wastewater and wastes; to further make perfect the urban road network and promote construction of the urban public transportation system; to reinforce reconstruction of information assurance and emergency infrastructures; to enhance informationalized level and recover 22 urban emergency shelters including greenbelts.

In addition, construction of the Project satisfies the development plans of affected districts and counties, which have been explained in details in the feasibility research report of the Project. No more explanations will be made here.

3.2.2 Social Suitability of the Affected Public

1. The public is highly supportive to the Project

Field survey shows that 83.8% informants said that they were clear about the Project, while 12.9% informants were not so clear about the same. Most of local residents who are clear about the Project are supportive to the same.

It is also found in the field survey that almost all the informants are supportive to construction of the Project, especially the emergency shelter to be built. It is widely believed among informants that what they need is not only a nearby shelter to protect them in case of natural disaster, but more a square where they can relax themselves and do exercises in daily life.

Table 3-7 Public support to the Project

District/County	Firm Support	Conditional Support	Don't Care	Oppose
Yucheng District	85.2%	11.1%	3.7%	0
Mingshan District	95.5%	0	4.5%	0
Baoxing County	85%	5%	10%	0
Lushan County	86.7%	6.7%	6.6%	0
Tianquan County	87.5%	6.5%	6%	0
Shimian County	78%	22%	0	0
Yingjing County	75%	22%	3%	1%

2. Adapt to nearby residents

To all the public in the affected area, construction of the Project will help improve the out-of-date infrastructure facilities, provide more opportunities for development and improve the urban living environment.

The nearby residents here are different from those affected directly by land requisition and house demolition. They will benefit from implementation of the Project, including typically more convenient traffic, rising price of houses and lands, more employments and rising income.

Appeals of this affected group are that the Project can be finished as soon as possible and the living environment, regional economic development and traffic conditions can be improved.

3.2.3 The Project adapts to other stakeholders

1. Adapt to the Project Owner

The Project Owners looks for early completion of the Project, perfect emergency

evacuation system, perfect urban risk-protection function, improved disaster prevention and reduction capability, facilitated local infrastructure and improved environment for investment. Therefore, the Project and its Owner adapt to each other fundamentally.

2. Adapt to local stores and enterprises

Ya'an has abundant tourism resources and the Project Team learns from the Tourism Bureau of Ya'an that the consolidated income of the city from tourism industry in 2014 has for the first time exceeded RMB 10 billion (RMB 10.86 billion), marking a year-on-year growth of 53.6%.

Construction of the Project will further improve the infrastructure service quality and recognition of Yucheng District and thus more tourists will be attracted, which is definitely a favor to local stores and enterprises. Therefore, the Project and the local stores and enterprises adapt to each other fundamentally.

3. Adapt to the “40% bottom income group” and the women

Privileges will be granted to the “40% bottom income group” (disadvantaged group included) in the Project and development opportunities will be offered to local women to enhance their status.

The “40% bottom income group” is highly supportive to the Project. During construction of the Project, living supplies required by the construction team can be provided locally, which drives consumption of local agricultural products. At the same time, some non-technical workers are needed during construction of the Project, which provides jobs to local people. During operation of the Project, some economic benefits can be generated in ambient areas. Therefore, the local “40% bottom income group” shows their welcome and expectation on the Project, hoping that they can get sufficient compensation for land requisition or house demolition and that more jobs generated during construction of the Project can be offered to the poverty-stricken people first to guarantee their source of income. The Project is especially important to local women because the construction and operation of the Project will bring some jobs to local women, enabling them to take care of the family while making money and thus their economic status can be improved.

In a word, the Project adapts to the “40% bottom income group”, women and minorities.

4. The Project adapts to minorities

According to knowledge of the Project Team, minorities account for 2.84% of the total population affected by the Project. In addition, there is no community of minorities within the affected area and no minorities are involved in land requisition and house demolition. Thus, it is not necessary to prepare the minority development action plan.

Table 3-8 Information of minorities in the affected areas

District/County	Number of Villages Surveyed	Population of Minorities	Proportion of Minorities	Characteristics of Minorities Distribution
Yucheng District	6	10	0.09%	Mixed inhabitation with Han people
Mingshan District	6	12	0.19	Mixed inhabitation with Han people
Baoxing County	4	291	2.54%	Mixed inhabitation with Han people
Tianquan County	2	0	0	There are minorities in the county downtown but no in the affected area
Lushan County	2	0	0	There are minorities in the county downtown but no in the affected area
Yingjing County	1	67	2.07%	Mixed inhabitation with Han people
Shimian County	4	1248	12.98%	Mixed inhabitation with Han people
Total	25	1623	2.84%	

Most minorities in the affected areas live scattered and show no obvious difference with Han people in lifestyles. The Project brings development opportunity to the minorities and facilitates the economic and cultural prosperity. The Survey on Social assessment shows that local minorities are greatly supportive to construction of the Project and no boycott by individuals or groups against the Project or construction of the Project has taken place. It is recommended to offering jobs to the minority workers firstly during the Project period. Field investigation shows that minorities have expressed their support to construction of the Project and are intended to provide service during the construction and operation period of the Project so that to increase their income.

Minorities in Shimian County shall be specially explained here. Although Shimian is a minority county, the rapid urban development in recent years has attracted great floating population and thus results in great population mobility. In the fact, minorities living in Shimian downtown accounts for only 26.5% of the total population in the areas affected by the Project. In addition, there are 19 ethnic groups in Shimian County including Han, Yi and Tibetan and these minority groups show mixed inhabitation features, like Han and minorities and different minority groups. Mandarin Chinese is used for daily communication here. Investigation on the population and distribution of minorities in towns and communities affected by the Project shows that local minorities are mainly Yi people and Tibetans next. In a word, there are not too many minorities in the affected areas and such minorities live scattered in different communities and there is no minority villages.

4. Assessment on Positive Social Impacts of the Project

This part will follow the social impact indicators determined earlier herein to analyze one by one the positive social impacts generated by the Project. For the purpose to better highlight the benefits brought by the Project, it is necessary to understand the current shortages of economic development of Yucheng District so that to compare the direct or indirect positive impact generated by the Project.

Generally speaking, construction of the Project will definitely facilitate perfection of infrastructure facilities of Yucheng District, and thus promote perfection of local emergency shelter systems, improve local economic development, create more employments and jobs, enhance income of local residents and finally realize the coordinated urban-rural development.

4.1 Disadvantages for development of the affected area

4.1.1 Poor traffic facilities

Ya'an is an east-west belt-like city and the inter-city transportation and the inner-city traffic are poor. At present, the main road connecting the east and the west parts of the city is the national road 318, the Binjiang Road and the North Outer-ring Road. The national road 318 and the line 108 go through the city and act the east-west trunk road in the urban center. A lot of vehicles as well as a lot of traffic lights gather here, making the traffic rather jam there. As a result, it is almost impossible to drive fast on the road and great interference to the traffic organizations, traffic safety, urban environment and noises. At present, Daxing District has rather poor road network. Except for Yahe Road going through the whole town, the other roads there are all dead-end road, which results in simple road structure for traveling of local residents and makes their life inconvenient. What's more, great safety dangers exist for safe evacuation in case of dangers. The current roads are almost of poor quality, especially that the Yahe Road undertaking intercity communication shows severe road surface distress and great flying dust caused by vehicles, which brings in adverse influence to the life of local residents.

The development of public transportation is poor and parking spots are greatly insufficient. There are only 6 bus lines in the urban downtown, with totally 56 buses in service and the annual passenger volume is 4 million person-times. There is no dedicated parking lot or bus station. At the present, Ya'an has totally 221 taxies, 9 taxies to each 10,000 people, which is rather lower than that of similar cities. Temporary road-occupying parking lot in the urban downtown is almost full, with about 1670 parking spots. There are over 300 parking spots in the courtyard or underground parking lot in restaurants and hotels. However, the actual quantity of parking spots open to the public is rather limited; there are approximately over 200 parking spots in the parking lot open to the public (such as the salt industry company, the underground parking lot of Cai Gen Xiang Restaurant, the Wenzhou Shopping Mall, the Holiday Square and the Dingshan Home Appliances Center, etc). But the quantity of parking spots occupied by vehicles is far shorter than that available for parking, thus the utilization rate is rather low.

4.1.2 Shortage of emergency evacuation roads and shelter squares

Shortage of emergency shelters is common in affected counties and districts. Shelters available at present are mainly squares, greenbelts, parks, schools and other public facilities. But they don't match the population density there at the present.

Let's take Yucheng District as an example. Emergency shelters there are acted by

schools, large parks and squares. According to related planning, the total area of shelters is 77,000m², including 46,200m² of effective shelter area. By 2030, the population of Yucheng District will reach 58,000, requiring at least 87,000m² of shelters. Therefore, the existing shelters are far from enough. What's more, supportive facilities there are insufficient and there are sharp demand-supply differences. It is urgently necessary to build new urban shelters with more sophisticated supporting facilities. The shortage of shelters is common in other affected counties and districts.

The emergency evacuation exit is the lifeline for earthquake relief work. Some counties and districts are restricted by geographical conditions, such as Baoxing County. At the time of disaster, the public all rushed to Yanjiang Road--the only emergency access of the county downtown, which resulted in severe traffic jam by a great deal of emergency vehicles, tools and materials due to shortage of transportation routes. As a result, the earthquake relief work was seriously hindered. The poor emergency evacuation system of Baoxing County during earthquake relief was highlighted, that is, insufficient and poor emergency evacuation road system.

4.2 The Project is Beneficial to Improve Infrastructure

4.2.1 The Project improves the risk-standing ability of the city

Construction of the emergency shelter will further make perfect the local emergency evacuation system and the regional risk-standing ability and improve the disaster prevention and reduction ability of the disaster area.

The overall social emergency handling ability of a city depends on a series of urban infrastructure facilities. Besides the corresponding evacuation channels (roads), corresponding emergency shelters are required too. The emergency shelters here refer to those pre-designated places with certain functional facilities which protect local people from direct or indirect damages brought by the disaster and guarantee the basic life of such people within a period after such disaster. 11 kinds of emergency protective functions including the emergency command center, independent power supply system, emergency helipad, emergency fire measures, emergency evacuation area and emergency water supply, shall be made available on such shelter to form an integrated complete network combining telecommunication, electricity, logistics, stream of people and stream of information. Construction of the disaster preventing and reducing emergency shelter in the Project is an important part to fulfill the governmental function and strengthen social management and public service. It is also an inevitable requirement to cope with public accidents and minimize the loss of life and property of the people.

4.2.2 The Project facilitates improvement of traffic facilities and make convenient the traveling of local residents

Restricted by the poor economic development level, Ya'an lacks funds for construction. Road and traffic construction in both Ya'an city and counties subordinated to it are relatively poor and the existing roads have no proper maintenance and repair. In addition with the earthquake this time, most road surfaces are cracked now and the road slabs are thus filled with water, which has severely hindered vehicle driving and the overall urban environment. Therefore, construction of the Project is necessary to restore and improve road traffic of Ya'an.

Construction of roads will strengthen traffic communication between different counties and districts of Ya'an, make it convenient for local residents to travel, enhance resistance to natural disasters, improve ecological environment and relieve jammed traffic there.

4.2.3 Further improve the flood control facilities of the city and enhance the flood control capacity

Among the projects to be built this time, three counties (districts) have the levee construction project: Mingshan District, Shimian County and Yingjing County. Survey introduced in the Part 2.6.3 herein shows that the flood control facilities in these three counties/districts are poor and most rivers even have no flood control facilities. The river reach there cannot form a complete flood control system and huge loss will be resulted in case of flood.

Among the projects to be built in Mingshan District, the levee at the west part of Mingshan River and the levee at the north part of Huaixi River are part of the urban flood control project of Mingshan District. Implementation of such projects will realize full construction of the levee at the west part of Mingshan River within the planned Pingqiao Area. The built levee will integrate with the existing levee in Pingqiao District and thus improve the flood control ability of the city greatly. It will also beneficial to make perfect the whole urban flood control system and provide powerful guarantee to the production and life of local residents.

Construction of the levee project in Shimian County will enhance the flood control quality from once per 20 years to once per 50 years. The flood control quality of the built upper and lower stream levees connected to the levee to be built this time is once per 50 years. Thus, the weak levee at Yanzi area will be greatly improved and the flood control ability of the whole Shimian downtown. The whole flood control system of Shimian County can be improved constantly.

Construction of the flood control levee in Yingjing County will not only improve the flood control capacity of the county, but also improve the urban environment quality, improve water environment and ecological environment, and finally enhance life quality of local residents. Cabinet-type collection boxes will be put at proper place near to the flood draining canals after reconstruction of the same, so the existing problem that no dump sites are available for household refuses. Wastewater interception pipes will be put at bottom of the canal in the old town to collect household wastewater of nearby residents. Comprehensive pipelines (rainwater and wastewater) will be built while reconstructing the Fuyu Road, which will eliminate the problem that the water in rivers is polluted due to random drainage of wastewater into the river. Construction of the project will also protect the urban environment effectively and facilitate the development of urban-rural ecological system in the positive direction.

4.3 The Project Facilitates Local Economic Development and Realizes Common Prosperity

4.3.1 The Project will improve economic development environment of Ya'an

Implementation of the Project shows significant geographic advantages to reinforce the competitiveness of Ya'an City and facilitate the development of modern transportation. To be specific:

Construction of the Project brings about fundamental conditions for local counties and districts to speed up urban construction. The development environment of Ya'an is optimized constantly thanks to the quick development in recent years. Along with implementation of the Project, personal exchange and economic contact in every county/district downtown are strengthened, which provides good conditions to speed up quick development of the urban downtown. The reconstruction of roads sets solid basis for the construction of other items there and will definitely facility quick

development of the city.

Implementation of the Project will relieve the through traffic pressure and environmental pollution the original national road G318 and create a modern urban atmosphere. Also, it plays a critical role to protect the urban charms, enhance urban quality and build the urban image and will help strengthen the status of Ya'an as the political, economic and cultural center in the middle Sichuan Province and reinforce its influence as a regional central city.

4.3.2 The Project will increase income of the “40% bottom income group”

If the Project can further improve and enhance the road capacity of Ya'an and help transportation of products of local enterprises, it will bring more development opportunities to local enterprises, satisfy local residents' needs for nearby employment and increase income of local people.

At the same time, reconstructed infrastructure in the affected area will attract investment from the outside world. The investment in return will employ a lot of emigrant workers to work there, thus a great deal of employments can be created and such employments can be offered to the local 40% bottom income group and women.

For example, the Project will provide part-time job and business opportunities to local residents during the construction period. According to design of the Project, some jobs will be created during the implementation stage and the operation stage of the Project. What's more, construction of the Project will drive the development of service industry nearby. For example, local residents can provide raw materials and catering service to the construction team during the construction period, which will bring about a great deal of jobs and opportunities to sell agricultural products under the multiplier effects. During the operation period, unskilled jobs will be offered firstly to the affected people on the premise that the salary is not lower than the averages of similar workers. All these benefits will bring about opportunities for local residents to increase their income.

Questionnaire shows that 76.5% informants are willing to take a job during the construction and operation periods of the Project. As for the reason of job hunting, 80% informants believe that it is good to work nearby because they can take care of the family; 5% informants think that the salary difference is narrow; 15% informants believe that their traffic cost can be reduced.

As for the reason of unwilling to take a job from the Project, 40% informants think there is no proper job; 42% informant see no future of such job, and there is another part of informants who believe their income is enough and there is no need to take another job.

4.4 The Project will Facilitate Women Development

The Project will provide job opportunities to local women. The social and economic survey on the affected area shows that in the rural area affected by the Project, go out to work as a migrant is a common way to realize employment and earn living. Land contracted by rural families is generally cultivated and planted by the elder, women and juveniles in a simple and maintenance-purpose ways. As to women, both the poor personal quality and the family burden (the older and the children) are preventing them going out to work. Therefore, most women have to stay in the rural area to undertake heavy agricultural production activities and housework, with relatively lower social status and economic status.

A great deal of employment can be offered during construction of the Project, which

will on one hand create nearby non-agricultural jobs to local women to enhance their income and social status. On the other hand, the constant development of tourism industry will enable women to work near their hometown. For example, they can get engaged in catering and service industry which requiring little labor skills and common housewives can be qualified. Therefore, the women can take care of their families while taking non-agricultural jobs and their housework and agricultural work intensity can be relieved. The helpless state of women can be relieved significantly and certain income can be made to enhance both the social and economic status of women. In a word, the Project is of great significance to local women.

4.5 The Project Shows Sustainability of Social Development

4.5.1 Economic sustainability

Total investment of the Project reaches RMB 169.97 million, including USD 2640 million, loan from the World Bank and the remaining part raised from domestic China.

Table 4-1 Investment on the project and local fiscal revenue

County/District	Investment (RMB 100 million)	World Bank Loan (US thousand)	General local financial revenue 2014 (RMB 100 million)
Yucheng District	5.04	48000	3.18
Mingshan District	2.40	30000	2.49
Baoxing County	2.02	31000	2.30
Lushan County	2.85	40000	1.47
Tianquan County	3.12	39000	2.88
Yingjing County	2.03	26000	3.38
Shimian County	3.84	50000	8.63
Total	21.3	264000	24.33

4.5.2 Social sustainability

Field survey shows that infrastructure in the affected area is rather outdated and some area has very inconvenient traffic, which hinders the local social and economic development in certain degree. The Project is extensively supported by the masses at all levels in the affected area, with the viewpoint that the Project will greatly drive the local economic development.

The purpose of road construction of the Project is to improve the road traffic network so that to make more convenient the traveling of local residents. After completion of the Project, the traveling time of local residents will be shortened, with traffic expenses reduced. Therefore, there will be no willingness-to-pay and ability-to-pay problems. Construction of other infrastructure facilities will further improve the ecological environment of affected areas, improve the emergency and disaster preventing and reducing system and push forward the local economic development.

However, attention shall be paid that the Project will result in certain negative impact to the affected area besides positive ones. Such negative impact lies mainly in the environment and traffic aspects, such as noise pollution, air pollution and traffic jam during the construction period.

In a world, the social benefits brought by the Project are far greater than adverse impacts brought by the same, thus the Project shows social sustainability.

5. Negative Social Impacts and Risks

5.1 Land Requisition of the Project Will Result in Certain Impact

Field survey on the physical impact amount shows that the Project involves in permanent requisition of collectively-owned land and house demolition. The proposed area of rural collective land to be permanently requisitioned is 773.6mu, including arable land of 612.5mu, accounting for 79.1%; 10.5 mu of garden land, accounting for 1.4%; forest land of 106.4 mu, accounting 13.7%; homestead of 30.2 mu, accounting for 3.9%. In terms of crops, local villagers grow rice, corn and cole, and the villagers grow tea. The land requisition involves 6 towns and townships and 16 villages, affecting 2341 people from 666 families.

The influence of changes in land resources to the farmer's income is reflected mainly on the changes in farmland area. Field survey shows that few rural households rely on agricultural income for living now. Income of most households consists of the labor income by the young people in the cities and income from agricultural activities by the old, women and juvenile staying at home and the youth may come back home for farming or harvesting at the busy season. Agricultural income and service income constitute the main resources of household income in rural areas. Since construction of the Project will requisition some land, including permanent requisition and temporary land requisition, which may result in certain adverse impact to the income of some people.

Since the Resettlement Action Plan (RAP) has made detailed analysis and introduction on the impact to affected people, no further explanations will be made here, please refer to the RAP for social impact resulted by the Project.

Furthermore, the Project will result in no non-adaptability resulted from the changes in the identity of affected people.

As for people whose identity is changed from rural residents to urban residents due to land requisition, experience in similar activities indicate no non-adaptability resulted from identity changes from agricultural to non-agricultural residents. After the change in identity, most of the youth will go out for work, while the old can take social security fund for urban residents. At present, there is roughly no non-adaptability resulted from the change in identity. No further explanation will be made on the compensation and social security fund made to and livelihood recovery, of land-losing farmers. Please refer to the RAP for details.

5.2 House Demolition of the Project May Lead to Certain Risks

The project involves 6 towns and 11 villages from 5 counties or districts and demolition of 286 rural household, affecting 1191 people. The demolition area of houses is 77269 square meters. According to the structure, the brick and concrete structure 53867 square meters and brick-wood structure 21628 square meters.

Among all the affected districts and counties, Yucheng District has the greatest demolition work amount, with the area reaching 45810m² and 480 people from 113 families being influenced.

5.3 Impact during the Construction Stage

During the construction stage of the Project, the construction vehicles running in the affected area and the land-occupying fences for construction will both result in traffic jam near the construction site, as well as noise and dust pollution.

Meanwhile, at the construction period, the outcomers may result in certain impact on the local public security. The construction activity may result in increase of infectious disease and disease-carrying vectors, which may result in severe health danger to the Project personnel and local residents. For example, the dense construction personnel and the extensive diet and daily life may result in occurrence of epidemic infectious diseases. AIDS is another area to which special attention shall be paid. In this regard, the publicity on AIDS prevention and control shall be strengthened among the construction team.

6. Social Management Plan and Its Implementation

This part explains the social management plan pertinent to negative impacts of the Project set forth in Chapter 5, that is, what measures will be taken to minimize the negative social impact resulted by the Project, better expand and strengthen positive social impact of the Project and enhance the overall benefits by the Project.

6.1 The Design Optimization Program for the Project

Construction of the Project involves in land requisition, house demolition and resettlement, which will inevitably influence the existing living conditions of local residents. Thus, during the planning and design stages of the Project, the Designer and the Owner have taken following effective measures for the purpose to minimize the negative impact of the Project to local social and economic development.

If design optimization is a must during the planning stage, impact of the Project to the local social and economic development shall be taken into consideration as much as possible as a key factor for design optimization.

To minimize demolition and relocation, following measures are taken: the roads are designed with different widths such that the original red line width is kept the same, so that to cut down the land requisition amount and minimize impact of the Project to the local social and economic development and living of local residents. Furthermore, wasteland and state-owned land are used as much as possible to cut down requisition of farmland.

6.2 Make Good Compensation for Land Requisition

Resettlement and compensation for land requisition are always the hot sources of social contradictions. Following social management plan is recommended for construction of the Project, namely, the following three basic principles shall be observed during land requisition:

1. Legal compliance: the resettlement and compensation for land requisition must be made strictly according to the philosophy of “fair, just and open” when related standards have been determined.
2. Latest policy shall prevail: during the implementation of land requisition and house demolition, if new policies are released, such new policies shall be followed.
3. Guaranteed livelihood recovery: During or after land requisition and house demolition, the “guaranteed livelihood recovery” shall be taken into consideration so that not to make the life quality of affected people decrease.

6.3 Measures to Relieve Social Impact of the Project

6.3.1 Safety management during construction stage of the Project

The construction organization shall strictly observe the *Law on Safety in Production* and the *Provisions on Safety in Production of Sichuan Province* and other related laws and regulations. Before starting construction, competent departments of the company shall make disclosure on safety technology concerning key parts of the Project to the project department and related documents shall be prepared; the person-in-charge of the project department shall make disclosure on construction technology to all the construction management staffs and related documents shall be prepared. Before starting of each working procedure (sub-project), the head technician of the project department responsible for construction is required to make disclosure on safety technology to all the workers engaged in the construction and faithfully disclose the

danger factors in the work place, related preventive measures and emergency troubleshooting measures, related records shall be made too.

Furthermore, special measures and regulations shall be made for safety management on the construction site or concerning hazardous operation, work at heights or in special weather and work in down-digging projects. Special supervision shall be made too. Field survey carried in the current stage shows that safety management provisions are observed constantly by all related departments and no major safety accidents take place.

Moreover, special attention shall be paid to education on construction safety. It is required that all staffs of the Project shall participate in training concerning safety and production knowledge. The importance and necessity of safety in production shall be strengthened at anywhere and in any time. Safety ideas represented by safety first, specific responsible person and zero accident shall be followed and regulations on construction management, safe quality training and special technical training shall have been set up.

6.3.2 Dust and Noise Management during the Construction Stage

Impact of the Project to the affected area during the construction stage shall be cut down, to be specific:

Fence on the construction site shall be continuously enclosed with the distance from residential houses at least 5m, or the fence shall be heightened. Protective screens or other noise-reducing measures shall be taken; green dense mesh nets shall be used to fully enclose the external face of the scaffolds on the construction site.

The construction site shall be hardened, with watering and dust-lowering measures being taken as appropriate; watering first before you are ready to clean the road pavement, floor, scaffold or enclosing nets; garbage at height shall be delivered jointly in barrel or being delivered out closed through pipeline. Never throw about garbage at height.

No ponding is allowed on the construction site and no sludge can be drained randomly; wastewater from construction cannot be drained out unless being two-stage precipitated.

Construction wastes shall be delivered out in time, or be covered if will not be delivered out within 48 hours.

Trucks entering the construction site shall give no whistling; garbage truck shall have the carriage enclosed and washed before traveling outward.

Watering and dust-lowering measures shall be taken for mechanical works; outdoor demolition work shall be suspended if the wind speed is predicted as will reach level 5 or above.

Pre-mixing mortar and pre-mixing concrete are recommended. On-site mixing work on the downtown area is forbidden.

Large mechanical equipment on the site shall be kept as much as possible away from the residential area and special care shall be paid to avoid sharp mechanical noises; hoisting work on the site shall be communicated by flag or wireless means instead of whistling, knocking on the steel pipe or other ways where loud noise can be produced.

Pressure pump, electric saw, toothless saw, grinding wheel and other small-size loud-noise fixed equipments on the construction site shall be operated in a temporary equipment room; mobile loud-noise equipment such as the pneumatic pick shall be

operated in a shed if possible.

Substances on the construction site shall be loaded and unloaded gently and noise-lowering tools such as straw bag shall be paved on the ground; large substances shall be loaded/unloaded with hoisting equipment. Unloading directly from the truck without necessary tools is prohibited.

No construction activity shall be carried out from 22:00 ~ 06:00 unless being approved; even if it is approved, noise emission shall be controlled; highlight lamps shall not shine at windows of residential houses directly; the construction organization shall earlier notice the night construction activities and corresponding noise-lowering measures to adjacent communities.

For deep foundation excavating and underground works, measures to protect the underground utilities and adjacent buildings shall be taken and the construction proposal shall be evaluated earlier by related experts.

If roads shall be occupied by construction of the Project, related formalities shall be handled as required.

Responsible officers on the construction site shall take turns on duty during the construction period and handle in time complaints about disturbance to local residents.

6.3.3 Management to Construction Workers

Management to construction workers shall be strengthened during the construction stage. Here are the recommendations:

1. Public security control to construction workers

The Regulations on the *Public Security Management to Temporary Residents of Sichuan Province* shall be implemented correctively to strengthen public security management to construction workers and safeguard social order. Furthermore, it is recommended to set up police office near to the Project site or strengthen community-based security protection nearby as they are external measures to strengthen public security control. As for internal measures, public security matters shall be publicized among the construction workers to prevent criminal activities.

2. Wages of and Other Safeguard Measures to Construction Workers

- (1) The construction organization is required to sign full-amount labor contract with the construction worker so that to make clear the legal rights and obligations of each party. The labor-capital department of the construction organization shall monitor payoff by the labor service output department.
- (2) Clearly indicate the minimum wage standard for construction workers and follow national regulations on holidays and festivals. Overtime wage shall be paid if overtime work or work on the legal holidays or festivals is required. The overtime wage cannot be deducted for any reason;
- (3) All construction workers shall be included in the work-related injury insurance system and serious illness medical insurance system;
- (4) Labor safety and health security management shall be carried out; health record shall be made and health examination shall be made once per year; training on labor safety and occupational disease prevention shall be carried out regularly; the special rights of women construction workers during the “four women’s stages” shall be protected.

- (5) Make through the complaint channel and handle the reports and complaints by the construction workers seriously and legal assistance shall be provided.
- (6) Further improve the fair and transparent information disclosure system concerning the Project and enhance the democracy and participation awareness of the worker, as well as the risk-taking and entrepreneurial ability of the same.

3. Health management to construction workers

Strengthen health (including diet and daily life) publicity among construction workers and AIDS prevention among the same. For example, the construction organization can organize and carry out AIDS publicity among construction workers so that to nip in the bud. In addition, prevention against other prevailing infectious diseases shall be publicized since the extensive construction worker team is a hot source of infectious disease. Disinfection work shall be made regularly at the diet and living place of the construction team and infection source shall be handled immediately if being identified.

6.4 Social Management Plan

The public supervisory mechanism and open information mechanism shall be carried out strictly during the design, implementation, following-up management and operation stages of the Project, so that to guarantee the realization of predicted targets and social benefits.

Social survey shall be made in the design stage of the Project, public participation shall be guaranteed so that to get suggestions of the public to the Project. For example, providing zebra crossing signs and traffic signal on road sections around project villages based on SA findings of women and elderly people’s needs for increased road safety and convenient use.

Immediately after the red line for land requisition and demolition is determined, announcement shall be made on the in-kind influence amount by land requisition and demolition of the Project.

Owner of the Project shall set up dedicated channel and mode for information release and indicate the progress of the Project in time during the implementation of the same.

Make public the design plan, resettlement action plan, environmental evaluation report, social assessment report on the government information publicity platform so that to received public monitoring. The feedback channel shall be made through too.

Table 6-1 Implementation plan for social management of the Project

Social Benefits	Action Measures	Responsible Institution	Duration	Main Indicators
1. Measures to realize the positive social benefits of the Project	Publicize and disclose key information and progress of the Project regularly on the TV station and newspaper of Ya’an and subordinated districts and counties	The Owner	From official start to end of the Project	Correct record shall be made to the publicity material and contents per time; make sure the public is widely

	Publicize preliminary construction scheme of the Project on the TV stations and other main medias of Ya'an and subordinated counties and districts 3 months before starting construction of the Project, for the purpose to collect consultancy, suggestions and opinions of the public, the publicity term shall be no less than 30 days	The Owner	3 months before construction of the Project	aware of the publicity content
	Disclose the final construction scheme on main medias of Ya'an city and subordinated districts and counties 1 month before starting construction of the Project and put up the written final construction scheme in other proper places	The Owner	One month before construction of the Project	
	Temporary jobs generated during implementation of the Project shall be offered firstly to local residents, especially the disadvantaged groups and women	The Owner and construction organization	The implementation process of the Project	Quantity of temporary jobs offered preferentially to local residents, the disadvantaged group and women shall be included.
	Permanent jobs generated from management and maintenance of the Project after completion of the same shall be offered firstly to local residents, especially the disadvantaged groups and women	The Owner	After completion of the Project	Quantity of temporary jobs offered preferentially to local residents, the disadvantaged group and women shall be included.
2. Impact to ambient residents in the construction stage	Release the construction program in the directly affected area one month before construction. The program shall indicate specific measures, including those to reduce noise pollution, dust pollution and traffic jam	The Owner and local organizations	Before construction of the Project	The public is highly aware of and satisfied at the publicity content
	Set up box on the affected villages to collect community quality supervision, public opinion, complain and suggestions during construction of the Project; such information shall be collected once per month by the Owner	The Owner and local organizations	Before and during construction of the Project	
3. Well carry out the land requisition and demolition work	Professional institution is invited to prepare the resettlement action plan for the Project and design scientifically the resettlement compensation plan, at the early preparatory stage of the Project	The Owner and consulting institution	See the Resettlement Action Plan	

	Make rational compensation and resettlement to the affected groups during land requisition, demolition and resettlement process	The Owner, local departments responsible for land requisition and demolition		
4. Improve Project management and capability building to realize the social benefits	Set up the complain mechanism; set up reception room at the Owner's office for complaint and appoint specific staff to handle the complaint	The Owner	In the preparatory, construction and operation stages of the Project	Make record on the handling of complaints; high satisfaction degree is obtained
	Set up internal monitoring and evaluation mechanism for the Project and submit the internal monitoring report to the Owner for decision	The Owner	In the construction stage of the Project	Record on the submitted internal monitoring report
	Set up the project content and information open mechanism and appoint specific person for release of Project information	The Owner	In the preparatory and construction period of the Project	The public is extensively aware of and greatly satisfied at the publicized contents
5. Set up of future management organization and capacity building of the same for the Project	Appoint clearly the future management institution or organization after the Project is put into service; provide training on professional skills and management knowledge to the main persons-in-charge and related staffs; new permanent jobs created by the Project shall be offered preferentially to local residents	The Owner and the management and maintenance institution of the Project	In the operation stage of the Project	Great satisfaction rate is obtained; the proportion of local residents in total workers on permanent jobs is no less than 60%, the proportion of women no less than 40%; the proportion of local women workers in total women workers is no less than 60%
	Attach importance to the public traffic safety after completion of road construction, train local residents (including the old, the disabled, the women and school children) on traffic safety (can be performed in schools)	The Owner and the local competent traffic authority	In the operation stage of the Project	Frequency of the publicity on traffic safety awareness among communities and public participation in such publicity activities; the frequency shall be once per year or more; Frequency of training on road traffic safety and the number of participants by ages and sexes

<p>6. Set up external monitoring mechanism for the Project so that to facilitate realization of targets and social benefits of the Project</p>	<p>Independent third party is invited for external monitoring; twice of external monitoring shall be made in the peak season of construction, or once monitoring if non-peak season and submit the monitoring report to the World Bank</p>	<p>The Owner and the consulting organization</p>	<p>In the construction stage of the Project</p>	<p>Monitor the completion status independently</p>
--	--	--	---	--

7. Mechanism for Complaint and Grievance

The mechanism for complaint and grievance is an important part of the Project to relieve risk and cut down negative social impacts of the Project, as well as an important way to publicize the Project information and guarantee public participation in the Project. The Owner is required to establish a set of highly transparent, simple and easily feasible procedures to collect complaints and grievance and handle the same so that to solve the dissatisfaction of the public in a fair and efficient way and guarantee the smooth implementation of the social management plan.

The people raising complaints or grievance are mainly people affected by land requisition or demolition by the Project, as well as other groups and construction workers, etc.

Contents of complaints and grievance shall be directly or indirectly associated with the Project.

Objects of the complaints and grievance are diversified, including mainly the local administrative organizations or higher governmental agencies, the Owner and related judicial offices.

Complaints and grievance are made in oral or written. In which, the oral complaints or grievance means the claimant or grievant reports his/her complaints/grievance to the Owner, the village (community), other governmental agencies or related workers in the non-written ways; while written complaints or grievances mean the same but made in written, signed by the claimant and indicating the basic information of the claimant/grievant, complaint/grievance subject, reason, expected solutions and other suggestions, etc.

7.1 Ways to Collect Complaints and Grievances

- (1) Report to the village committee or resettlement office set up in the town or sub-district on the complaints, progress, measures and existing problems;
- (2) The construction organization is required to report the construction progress and problems identified, mainly problems raised by the public and hindering construction of the Project, to the Owner at regular interval.
- (3) Land requisition and demolition coordinating problems identified on the construction site by the Owner;
- (4) Related information reported by the external monitoring institution;
- (5) Letters by and visits of the affected population;
- (6) Information reported by the work station of the Owner;
- (7) Related problems identified in the work inspection of the auditing and discipline inspection agencies;
- (8) Expenditure of land requisition compensation reflected in the statement of capital appropriation of the deposit bank;
- (9) Ad hoc survey for internal monitoring.

7.2 The Complaint Procedure

The complaint mechanism is set up during the preparing and implementing processes of the resettlement action plan during for the purpose that channels are always available for the affected population to raise their complaints concerning land requisition and resettlement. The complaint consists of four stages:

Stage 1: The affected person can report his/her complaints to local community committee or village committee if he/she has any questions about land requisition, compensation and resettlement. The community committee or village committee will solve such complaints within 2 weeks after receiving the same; the affected person can, if he/she is unsatisfactory at the handling decision given by the community or village committee, report in written or oral to local town government of sub-district office. If report in oral, the town government or the sub-district office will handle the complaints and record the same in written. The town government or the sub-district office will solve the complaints within 2 weeks.

Stage 2: If the affected person is still unsatisfactory at the handling decision given in Stage 1, he/she can report to the Project Management Office of related County or District according to related laws and ask for solutions.

Stage 3: If the affected person is still unsatisfactory at the handling decision given in Stage 2, he/she can report to the Project Management Office of Sichuan Province according to related laws and ask for solutions.

Stage 4: If the affected person is still unsatisfactory at the decision given in Stage 3, he/she can, after receiving the decision, file a suit at the people's court.

7.3 Principles to Handle Complaints/grievance

The resettlement office at all levels of local government shall carry out field investigation on the complaints/grievance raised by the public, listen to the opinions of the same sufficiently, consult with the same patiently and repeatedly and put forward with standard, objective and fair solutions according to related national laws and principles stipulated in the Resettlement Action Plan. Complaints failing to be solved shall be reported to the superior land requisition department in time and assist the same in investigation. The claimant/grievant is entitled to appeal to higher department for solution if the current decision-making agency fails to give reply in time on the complaint/grievance reported.

The women may have their special complaints and grievance during implementation of the Project. Thus, it is recommended to arrange female worker if necessary to handle complaints and grievances of the women. Local governmental or non-governmental organizations, such as the Civil Affairs Bureau and the Women's Federation, will also monitor the resettlement work and guarantee the rights and interests of affected population, especially affected women.

7.4 Contents and Ways of Reply

7.4.1 Contents of Reply

- Brief description about the complaint/grievance;
- Results of investigation;
- Related national regulations, principles and standards of the resettlement action plan;
- Handling suggestion and basis on which the suggestion is given;
- The claimant/grievant is entitled to report to the higher resettlement authority or file a lawsuit at the civil court, with the legal cost covered by the Owner.

7.4.2 Ways of Replay

- Complaints concerning special phenomenon shall be replied in written and such written replay shall be sent directly to the claimant/grievant;

- Complaints concerning universal problems shall be replied by holding the village committee or sending the written reply to the related community for solution.

No matter made in which way, the reply must be sent to the resettlement department responsible for the claimant/grievant.

7.5 Trace Record and Feedback of Complaints and Grievance

The local departments responsible for the Project shall, during the implementation of the same, make records and management concerning the complaint data and results of handling and report such data and results to the Owner at all levels in written, once per month. The Owner will check records of complaints/grievance at regular interval.

8. Monitoring on the Implementation of the Social Management Plan

8.1 Internal Monitoring

The Owner is responsible to organize to implement the social management plan and finally responsible for internal monitoring on the same.

8.1.1 Purpose of Internal Monitoring

Internal monitoring on the social management plan of the Project is part of the routine management content of the Project during implementation of the same and an important guarantee for the successful implementation of the Project. The purpose of internal monitoring is to make sure the social management plan can show nice functions in the implementations stage and protect rights and interests of the affected population from damage and guarantee the successful implementation of the Project. Auditing authority at all levels will exercise the audit-based supervising rights to related departments under their jurisdiction according to related laws and regulations.

8.1.2 Approaches for Internal Monitoring

Approaches for internal monitoring mainly include data collection and data analysis. Data collection means that the Owner shall set up archive management system for the Project data and appoint specific person to take charge the classification and registration of all data concerning the Project. Other data collection approaches are applicable during the internal monitoring and evaluation process, such as the questionnaire survey and interview, etc. Data analysis means to sort out and summarize the collected data in the internal monitoring report with the method of comparative analysis or inductive analysis.

8.1.3 Contents of Internal Monitoring

Contents of internal monitoring on the social management plan of the Project mainly include:

1. Summary of the implementation of the social management plan;
2. Progress and timeline of activities listed in the social management plan;
3. Groups affected by the Project and the extent of influence, extent of coverage and problems emerged;
4. Effects of activities of the Project;
5. Capital appropriation and utilization during implementation of the Project;
6. Personnel and archive management during implementation of the Project;
7. Adjustments, changes and related causes during implementation of the Project;
8. Public participation and consultation during implementation of the Project.

8.1.4 Cycle and Report of Internal Monitoring

To guarantee the successful implementation of the social management plan of the Project, the Owner shall submit the *Internal Monitoring Report on the Social Management Plan* to the World Bank, with the cycle determined by the Owner.

In addition to the internal monitoring, it is suggested that the Owner shall set up the reporting system to register and record separately the monitoring situation per month, with the report contents including without limitation:

1. Progress of the land requisition and house demolition work;

2. Utilization of capital for land requisition and demolition;
3. Complaints and grievance of affected residents on the Project, etc.

The report can be made separately concerning each of above contents, or be made as an independent part of or appendixes to other reports.

8.2 External Monitoring

8.2.1 Executor of External Monitoring

The external monitoring shall be made by the third party appointed by the Owner. Such independent third party shall be qualified to monitor and evaluate the implementation of social management plan and put forward with advices for decision-making. The Owner will, by way of bidding, determine the external monitoring agency and report to the World Bank for approval. The independent external monitoring institution will, by providing technical assistance to the Owner and other related functional departments and carrying out field investigation as required, implement all the basic monitoring work.

8.2.2 Purpose of External Monitoring

The external monitoring is a supplement to the internal monitoring on the social management plan.

External monitoring by the independent third party will facilitate smooth implementation of the social management plan and guarantee realization of expected social benefits from the social management plan. Furthermore, external monitoring by the third party will eliminate disadvantages including possible unfairness and injustice in the internal monitoring. External monitoring and assessment will provide assessment opinions and suggestions to the whole process of social management plan implementation, provide pre-warning system to the supervising authority of the Project and provide channels to report opinions concerning the Project.

8.2.3 Approaches and Contents of External Monitoring

Approaches of external monitoring shall be decided independently by the monitoring agency, but contents shall in every aspect satisfy the monitoring requirements listed in the social development plan on specific actions and task outlines.

8.2.4 Cycle and Report of External Monitoring

The external monitoring and assessment report on social assessment and report shall be made synchronously with the external resettlement monitoring. The external monitoring and assessing agency shall submit the external independent monitoring and assessment report to the World Bank through the Owner, at the frequency of twice per year if in the peak season of construction, or once per year if non-peak season.

9. Social Assessment Conclusion and Suggestion

9.1 Findings in Social Assessment

The social assessment team found during the field survey that:

Firstly, if analyzing from the whole, the infrastructure of the 7 districts and counties subordinated to Ya'an is relatively outdated and the road traffic is a typical example. The team learned during field survey that most local residents are unsatisfactory at traffic near to the road to be built because of narrow road, traffic jam and shortage of parking spots, as well as shortage of emergency shelters in all the affected districts and counties. Therefore, this Project will improve the outdated infrastructure in the affected areas, improve local emergency evacuation system, optimize the urban risk-standing ability, strengthen disaster prevention and relieving capability and bring more opportunities for the development of local tourism industry.

Next, the disadvantaged groups and the women show special requirements on the Project. It is found by the team through investigation that most local male workers in a family are working outside, while the women stay at home to take care of children (accompany the children on the way to school or home) and the elder (take them to hospital or back home from the hospital). Therefore, the women are quiet concerned about local traffic safety facilities. It is believed among female informants that the existing traffic lights and zebra crossings are insufficient, most of the safety marks and road marks are setup irrationally and few road marks can be seen. Special attention shall be paid to pregnant women, the elder, the disabled, and other people unable to move freely. For example, humanistic design can be used for the bus stop by ways including seats in the bus stop, ramps for the disabled or females carrying baby carriages or shopping carts, and special safety measures for the pregnant women, the elder, the disabled and the people unable to move freely. Needs of the disadvantaged groups shall be considered too when designing the emergency shelter. For example, put benches or chairs in the shelter squares, or nursing room for lactating women for them to take care of their babies or nurse their babies in private room.

There are also findings in other counties and districts. See Table 9-1 for details.

Table 9-1 Social assessment findings concerning the Project

District/County	Social Assessment Findings
Yucheng District	<ol style="list-style-type: none"> 1. At present, Daxing District has rather poor road network. Except for Yahe Road going through the whole town, the other roads there are all dead-end road, which results in simple road structure for traveling of local residents and makes their life inconvenient. What's more, great safety dangers exist for safe evacuation in case of dangers. The current roads are almost of poor quality, especially that the Yahe Road undertaking intercity communication shows severe road surface distress and great flying dust caused by vehicles, which brings in adverse influence to the life of local residents. 2. The item to be built involves in great demolition work, which results in certain social risks.
Mingshan District	<ol style="list-style-type: none"> 1. Tea trees are planted around the new road to be built in the urban road of Pingqiao Village, Chengdong Township. As the main industrial crops of local people, the tea trees require special attention during construction. 2. Some affected people of Pingqiao Village, Chengdong Township rely on tea planting as the main source of income and their life will be impaired after land requisition. Thus, employment of them shall be solved firstly. 3. There are several communities around the Wulizhen Square. It is of great significance to rebuild it into a new emergency shelter. However, the noise and dust pollution during the construction period shall be controlled.

Baoxing County	<ol style="list-style-type: none"> 1. All the affected villages argue that the current roads are narrow and the traffic facilities are outdated, etc. Furthermore, Baoxing County downtown has insufficient emergency facilities. This Project will improved the outdated infrastructure of Baoxing County, improve the emergency evacuation system, optimize the risk-standing abilities and improve the disaster preventing and reducing capability. 2. Restricted by geographical conditions, Baoxing County downtown has narrow space for development. According to the current planning, Lingguan Town is selected as one of the key areas for development. Firstly, the terrain in Lingguan Town is flatter than that of Baoxing County downtown and the industrial park of Baoxing County lies there (mainly rock processing enterprises). At present, Lingguan Town has great road traffic pressure and the underground pipe network is insufficient there.
Lushan County	<ol style="list-style-type: none"> 1. The post-earthquake reconstruction results in a lot of items under construction simultaneously in Lushan County downtown. The stream of both people and vehicles is complicated and disorder and it is common that construction materials are stacked up here and there without order. 2. Construction timeline of the Project here shall be arranged rationally to prevent traffic jam.
Tianquan County	<p>The current traffic facilities of Tianquan County are poor. Although sufficient roads are available in the downtown area, the new urban area has fewer streams of people and vehicles, while most residents live in the old urban area, which makes the traffic there jam all the time. The traffic management there is in mess and the traffic control facilities are poor, which impairs traveling and overall environment of the county. Although certain land requisition and demolition work are involved in the Project, the risk is less according to the general evaluation.</p>
Yingjing County	<p>The Lushan earthquake has severely damaged the already poor municipal infrastructure of Yingjing County and resulted in severe inconvenience to the production, life and daily travel of local residents. Infrastructure improvement is required urgently there no matter from the angle of traffic conditions or the angle of disaster preventing and reducing.</p>
Shimian County	<ol style="list-style-type: none"> 1. Shimian County requires improvement urgently in both traffic conditions and disaster preventing and reducing capability. To actively speed up the post-earthquake infrastructure construction in Shimian County is the need for urban development of Shimian County and the need for the post-earthquake restoration and reconstruction plan. 2. The infrastructure construction project at Shimian County with loan from the World Bank will improve the production and living conditions of the masses in the disaster area, push forward the restoration and reconstruction and realize development and prosperity of the disaster area earlier, by building urban infrastructure facilities there.

9.2 Conclusion

Following conclusions are obtained based on social survey and social impact analysis on the Project:

Generally speaking, the Project shows relatively high social benefits and satisfies the local development plan. It shows also relatively strong economic and Social Suitability and sustainability;

The Project is widely supported by the public in the affected area because it will improve the infrastructure of affected area, improve the risk-standing ability of the downtown area, and make convenient the life of local residents,

The Project will provide opportunity for local workers to increase economic income and the income of the 40% bottom income group can be increased; it will also improve the investment environment of the affected area, make perfect the infrastructure and facilitate development of local tourism resources.

Local government and the related railway authority can mobilize local public resources and make related functional departments cooperate tightly to guarantee effectively the smooth implementation of the Project.

There are no minority areas affected by the Project. Minorities in the affected villages are living scattered and no minorities are involved in land requisition and house demolition, thus, it is not necessary to prepare the minority development action plan.

It is found by the project team during field survey that each surveyed village (community) has its own emergency plans and all the villages (communities) have organized the earthquake drill once to twice per year. Furthermore, the result of door-to-door questionnaire show that all the informants know the correct way to escape in case of earthquake and more than 95% informants say that they have been educated with professional earthquake safety knowledge.

All the items to be built in the Project are near to the downtown area and the roads to be built don't connect to poverty-stricken towns or villages at all and there are no problems or conflicts concerning land requisition. Statistics on the disadvantaged groups identified in Chapter 2.4.2 of RAP show that no minorities are in the disadvantaged group.

9.3 Suggestion

9.3.1 Public Participation and Publicity

In the early preparatory and implementation stages of the Project, it is recommended to publicize extensively related national laws, regulations, resettlement programs and contents of the Project throughout the affected area; extensive participation of the public in the preparatory process of the Project shall be guaranteed and the proportion of women and disadvantaged groups shall be guaranteed. Site for construction road, earth borrow and spoil ground, truck station and auxiliary civil engineering facilities shall sufficiently reflect public participation and consultation; opinions of the public shall be taken. For example, the Owner and the construction organization shall, before commencement of the Project, well plan and deliver the plan to the public for opinions and later construct according to the principle of convenient construction and convenience to the public.

9.3.2 Reduce Influence during the Construction Period of the Project

1. The construction organization shall, fifteen days before starting construction of the Project, report the Project name, construction site and deadline, possible noise pollution and measures to be taken to cut down the noise, to local environmental authority;

According to Article 30 of the *Environmental Noise Prevention and Control Law of the People's Republic of China*, night construction work which may generate noise pollution is forbidden, unless otherwise required by first-aid repair, emergency rescue, special production technology or other special requirements. If continuous work is required by special needs, a certificate issued by the county-level or above people's government or other competent authority shall be provided to notify residents nearby.

2. Arrange the application of construction machine reasonably and prefer low-noise machines. For example, the hydraulic pile driver can be used instead of the impact-type driver; shorten the service duration of noise equipments and strengthen maintenance of construction machines; try to cut down noise emission of construction machines and never use the piling machine at night; furthermore,

the transportation vehicles will produce mobile noises when passing the villages, which is weak at daytime but disturb rest of villagers at night, it is necessary to control the running to transportation trucks at night; major loud-noise equipment shall be put at proper place during construction. For example, the concrete mixer can be operated at the place far away from the sensitive objects and deliver the mixed concrete to the construction site. Closing construction is recommended for the Project and noise barrier shall be set up.

3. In the construction stage of the Project, the Owner, construction organization and the social security bureau of the affected area shall jointly provide opportunities for affected people produced by the Project, the 40% bottom income group and women to participate in the Project to realize nearby employment.

9.3.3 Handling of Construction Camps and Roads

The Project will, during the construction period, occupy land to build the construction camps and roads for temporary use. After completion of the Project, land occupied temporarily for construction of the Project shall be handled such that the land shall be recovered to the original state before being occupied or better than the same; the former functions shall be recovered and the land shall comply with the original landform. When the land is recovered and satisfies requirements for reclamation, a notice shall be given to local land authority and other related authorities for acceptance check and finally deliver the land for use.

Large-size construction sites and roads shall be handled according to the principle of “bringing convenience to local residents”. Communication with local land authority shall be made to determine the future use of such land.

9.3.4 Gender sensitivity and universal tolerance design

Such design is mainly represented as taking actual needs of the women, children, the aged, the disabled and other people unable to move freely and taking safety measures for them when designing the bus stop and shelter facilities.

For example, humanistic design can be used for the bus stop by ways including seats in the bus stop, ramps for the disabled or females carrying baby carriages or shopping carts, and special safety measures for the pregnant women, the elder, the disabled and the people unable to move freely.

Needs of the disadvantaged groups shall be considered too when designing the emergency shelter. For example, put benches or chairs in the shelter squares, or nursing room for lactating women for them to take care of their babies or nurse their babies in private room.

9.3.5 Improvement of Management Capacity of Related Organizations during the Operation Stage of the Project

1. Capacity building of related organizations shall be strengthened. Training managers of the Project on knowledge of Project shall be strengthened, as well as policies of the World Bank on the Project, so that to realize better management.
2. Public participation in follow-up management: It is recommended to include residents (women representative and representatives of the 40% bottom income group shall be included) of the affected land into the follow-up management of the Project.

9.3.6 The mechanism of public participation during the construction and operation stages of the Project

1. For the purpose to strengthen positive social benefits of the Project, it is necessary to:
 - Publicize the Project and disclose key information and progress of the Project through Ya'an TV stations, TV stations and newspapers of affected districts/counties;
 - Release the preliminary construction schemes on Ya'an TV station, TV stations and other main medias of affected counties and districts to collect consultancy, opinions and suggestions of the public, within three months before starting construction of the Project and the release shall last for 90 days or more;
 - Release the final construction schemes on main medias of Ya'an and the affected counties and districts within 1 month before starting construction of the Project and put up such schemes in written at other proper places;
 - Offer the temporary jobs generated during construction of the Project firstly to local residents; pay special privilege to the disadvantaged group and offer sufficient jobs to the women.
2. Guarantee normal life of nearby residents:
 - Disclose the construction scheme in areas directly affected by the Project to collect supervision by the public, within one month before starting construction of the Project. Contents of such scheme include detailed measures to be taken to reduce construction noise and dust pollution and relieve traffic jam during construction.
 - Set up the community-based quality monitoring and public advice boxes at each village (or village team) on the construction site during the construction period. Advices by the public shall be collected by the Owner once per month. Main monitoring indicators here are the extensive knowledge and satisfaction degree of the public at the publicized contents.
3. Facilitate the Project management and capability construction and guarantee realization of social benefits of the Project:
 - Set up the grievance and complaint mechanism. Specific staffs to receive and handle grievances and complaints shall be set up by the Owner, as well as the internal monitoring and evaluation mechanism for the Project. The Owner determines the whether and how to submit the internal monitoring reports. The main monitoring indicators here include careful registration of complaints and grievances and realize high satisfaction degree at the handling results.
 - Set up the contents and information disclosing mechanism for the Project. Appoint specific staff of the Owner to disclose information of the Project. The main monitoring indicators here include the extensive knowledge and high satisfaction degree of the public about the publicized contents.