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Ethnic Minority Development Plan

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1 Introduction

1.1 Project Background and Targets

The Siberian tiger (*Panthera tigris altaica*) is one of the five surviving subspecies of tiger in the world, which only exist in northeast China, far east region of Russia and mountainous forests in northern areas of the Democratic People's Republic of Korea. In recent years, with the continuous population growth in northeast China, local people start to rely more and more on natural resources. This has caused increasing fragmentation of suitable habitats for the Siberian tiger and a shortage of ungulate prey resource. Moreover, with the interference of various human economic activities and the fecundity decline of small species group in isolated habitats, the distribution and population of the Siberian tiger have reduced dramatically. The Siberian tiger has become extremely endangered now.

In order to promote the protection and management of the Siberian tiger and their habitats, the State Forestry Administration and World Bank jointly applied for the GEF "Landscape Approach to Wildlife Conservation in Northeast China Project", and got approval in principle on Feb 29th, 2012. This project is implemented in Northeast China, at the junction area of Heilongjiang Province and Jilin Province, close to the Primorsky Region of Russia and Hamgyong Province of North Korea. It involves Hunchun City, Wangqing County, Dongning County, and Muling County, with a total area of 15337.08 square kilometers. The aggregate amount of the project is 18 million US dollars. The undertaking units of the project include Jilin Forestry Department, Heilongjiang Forestry Department and the General Bureau of Heilongjiang Forest Industry.

Based on the above background, the main aims of this project include:

- To promote the wildlife conservation and restoration in northeast China through improving the ecological environment and friendly management in habitats of the Siberian tiger and its preys,

- To conduct social assessment of construction projects and put forward solutions or mitigation measures for its adverse impacts, so as to meet the requirement of protecting the ecological environment in the project area.

Based on the above background and after consultation between the State Forestry Administration, the World Bank and each undertaking unit, the Planning and Design Institute of Forest Products Industry of the State Forestry Administration will take charge of the social assessment of this project and compile the social assessment report according to related regulations of each unit.

1.2 Aim of the *Ethnic Minority Development Plan*

Based on the negotiation through open, timely and sufficient communication, the *Ethnic Minority Development Plan* aims to avoid potential negative effects of the program on these communities; to ensure they would obtain social and economic benefits that confirm to the cultural characteristics of local region, with related factors, such as gender and age, taken into consideration.

The *Ethnic Minority Development Plan* includes principles and measures in achieving the aims of the program. Contents of the program are consistent with the World Bank policy OP 4.10: “Indigenous Peoples” (2005).

The *Ethnic Minority Development Plan* applies to all ethnic communities in Jilin Province and Heilongjiang Province, whether the affected communities are located in autonomous counties or ethnic townships or not.

Ethnic communities are administrative villages in project areas of Jilin Province and Heilongjiang Province in which people of Chosen nationality and Man nationality exceed half of the total population.

Communities that are likely to be influenced refer to those ethnic communities within the project areas.

1.3 Framework of Laws and Institutions

The Constitution of China stipulates that all nationalities enjoy equal right of social, economic and cultural development and addresses that the minority nationalities shall practice regional autonomy in areas where they live in concentrated communities. The *Law of the People’s Republic of China on Regional National Autonomy* stipulates China’s policies towards minority nationalities. It’s stipulated that all ethnic groups are entitled with equal rights of the land and forests where they live for generations. During resources exploitation and construction in ethnic autonomous regions, the government will pay attention to the welfare of the minority nationalities, including their production and living in order to guarantee their benefits from economic development. The government will give certain compensation for natural resources lost in ethnic autonomous regions.

1.4 Assessment Methods

The Chosen nationality and Man nationality are the main minority nationalities involved in the project areas. It’s found from the investigation that the ethnic communities in project areas are mainly located in Jilin province. To compare these communities with the affected Han people, villages where minority nationalities and the Han nationality live together are also investigated.

During the investigation, we adopt various methods, including group interview, case interview, site observation, etc. We conduct a questionnaire survey of 82 people in the ethnic villages and a random sampling survey of peasant households around the reserves. Proportion of the households in the four investigated ethnic villages is shown in the following table.

Table 1-1: Sampling Statistics of Households in Ethnic Villages

Townships	Ethnic villages	Population	Chosen nationality	Man nationality	Han nationality
Yangpao Town	Yantonglazi	20	20	0	0
Yangpao Town	Dong'ala Village	22	14	0	8
Yangpao Town	Songlin Village	20	8	7	5

1.5 Definition of Impact limitation

The affected areas of ethnic minorities assessment is defined within the core area, buffer zone, experimental zone and nearby areas where livelihood activities or social activities may happen. Due to the difference of functional division of nature reserves, the project may have different influences in different functional zones. Based on the overall planning of nature reserves, the definition of each zone and regulations about protection and operation activities are as follows:

The core are: it's the key protection area of nature reserves. Any forms of logging, hunting or tourism is not allowed. It's only used for observation, research and resource monitoring. Nobody shall be allowed to enter the core area without approval to keep the ecology system not disturbed and make it renovate and multiply in natural condition.

The buffer zone: it's the buffer region of the core area. First, it's to mitigate the influences and disturbance of the external world to the core area. Secondly, it's allowed to conduct some scientific research, experiments, educational practice and specimen collection on the condition that the community environment is not destroyed. Tourism, production and trading activities, are prohibited in the buffer area. Thirdly, the buffer zone shall be recovered to the core area by improving the living environment of wildlife through vegetation recovery.

The experimental zone: on the condition that the original vegetation and rare wildlife resources are not destroyed, the nature resources in the experimental zone can be utilized properly to explore the effective ways of the sustainable development of nature reserves. Scientific experiments, educational training, ecological tourism and different forms of trading activities can be conducted and some production, living and management projects can be implemented appropriately.

2 General Situation of Ethnic Minorities in Project Areas

2.1 Demographic Situation of Ethnic Minorities in Counties (Cities) of the Project Areas

By 2011, the total population of 4 project counties--Hunchun County, Wangqing County, Dongning County and Muling County was 1,075,200, among which people engaged in agriculture was 520,500, accounting for 18.4% of the total population. People of ethnic minorities in project counties/cities was 344,700, accounting for 32.6% of the total population.

The implementation areas of the project are located in Hunchun City and Wangqing County of Jilin province, Muling City and Dongning County of Heilongjiang province. The project areas include some parts of state-owned forest farms of the four counties (cities).

Wangqing County is located in the east of Jilin province, northeast of Korean Autonomous Prefecture of Yanbian. Wangqing County has the jurisdiction over 8 towns of Wangqing, Tianqiaoling, Baicaogou, Luozigou, Daxinggou, Chunyang, Dongguang, Fuxing, 1 village of Jiguan, 2 street committees of Dongcheng district and Xicheng district, 200 administrative villages with 88,827 households and 253,696 people. There are 11 peoples include Han, Chosen, Man, Hui, Mongol, etc, ethnic minorities account for 33.2% of the population, among which 72,614 Chosen people are included, accounting for 28.6% of the population.

Hunchun City covers 11 peoples like Han, Chosen, Man, etc, with a population of 226,530. Among them, there are 118,057 Han people, accounting for 52.1% of the population, 85,659 Chosen people, accounting for 37.8% of the population, 21,562 Man people, accounting for 9.5% of the population, 1,252 people of other ethnic groups, accounting for 0.6% of the population.

Muling City is a county-level city of Mudanjiang, Heilongjiang province, which is located in southeast of the province, having jurisdiction of 6 towns, 2 villages and 127 administrative villages. There are 98,762 households in Muling City, with a population of 321,223, among them, the number of Chosen and Man is about 23,000, accounting for 7.5% of the population.

Dongning County is subordinate to Mudanjiang city, Heilongjiang province, which is located in southeast of the province, bordering on Russia to the east. The population of Dongning is 205,308, which includes 16 ethnic minorities with 11,763 people, they are distributed in 6 towns of the county, mainly are Chosen (9291) and Manchus (1997). The specific minorities of each town are Dongning town: 2221 Chosen people, 661 Manchus; Sanchakou town: 6340 Chosen people, 44 Manchus; Daduchuan town: 306 Chosen people, 284 Manchus; Laoheishan town: 233 Chosen people, 233

Manchus; Daohe town: 67 Manchus; Suiyang town: 196 Manchus.

The main body of the project areas in Jilin province is located at the Korean Autonomous Prefecture of Yanbian; the peripheral minority communities of the project areas in Heilongjiang province include Chosen town in Sanchakou, the peripheral towns of other project areas have minorities in diaspora. The implementation areas of the project are located in natural reserves and state-owned forest farm, with no inference of peripheral residential areas, which mainly are state-owned forest farms, and the staff are all Han people.

2.2 Main Characteristics of Minorities

The main minority of the counties (cities) in the project site is the Chosen people, meanwhile there are a certain amount of Manchu people, and the two peoples embody the characteristics of their nationality:

The most famous traditional food of Chosen people is rice cake, Naengmyeon and pickles; dog meat is one of Chosen's favorite meats. On clothing, Chosen people like to wear plain and white clothes, generally are short garments and long pants. They mostly live in horse-tail houses, which are built next to water sources. The Chosen people have a special custom named "beating clothes": every time the mid-autumn is around the corner, women will unpick and wash beddings and clothes to do dry spray, fold them in rectangular shape when they are half dry, and beat them in chopping board, which means "beating clothes". The Chosen people is also very passionate, they like singing and dancing, whose Farmer's Music-Dance, Dragon Drum Dance, Wedding Dance, Sword Dance and Hammer Clothes Dance are highly popular.

On eating, the Man people like sticky food, which includes steamed bun, sachima, shortening cake, deep-fried cake, etc. On clothing, they mainly wear cheongsam, waistcoat and mandarin jacket. The early residents of Man people are most famous known as "basement" and "shack". West is precious among Man people, the west kang in dwellings are reserved for respected guests. Man people don't like to wear dog skin hats and eat dog meat, meanwhile they don't eat raven meat, but having the custom of feeding and sacrificing ravens. The folk arts and crafts of Man are fragrant pouch, paper-cuts, octagonal drums, etc.

3 Minorities Overview in Peripheral Villages of Project Areas

3.1 Minority Villages Distribution

Due to the fact that the project implementation areas are located in some minority communities, in order to know the influence of the project implementation on peasant households of ethnic minorities, we conducted some surveys in villages of ethnic minorities of Heilongjiang and Jilin Province. Through discussion, the research group regard the villages in which ethnic minorities account for more than half of the total population can be defined as ethnic minority village. The population status of ethnic minority villages in or near the project area is shown in Table 3-1. Villages in which ethnic minorities account for more than half of the total population mainly include Lishugou village of Chunhua Town, of which villagers of the Chosen nationality account for 63.64%; Yanconglazi Village of Yangpaoxiang Town, of which villagers of the Chosen nationality account for 100%; Songlin Village of Yangpaoxiang Town, of which villagers of the Chosen and Man account for 54.93%; and Dongala Village of Yangpaoxiang Town, of which villagers of the Chosen nationality account for 60.38%. Based on the primary social assessment, the social assessment group confirm that the three villages in Yangpao Town are affected by this project.

Table 3-1: Statistics of Ethnic Minorities in Nearby Villages of the Project Areas

Name of Reserves	Town	Village	Affected Households	Affected People	Ethnic Minority		
					Minority Type	Population	Percentage of the village
Jilin Hunchun Lanjia protected areas and Jilin Hunchun Siberian Tiger National Natural Reserve	Chunhua	Lanjia	67	190	Chosen	75	39.47%
		Guandaogou	91	222	Chosen	63	28.38%
		Xiacaomao	76	268	Chosen	57	21.27%
		Shangcaomao	57	169	Chosen	35	20.71%
		Fenshuiling	49	150	Chosen	50	33.33%
	Yangpao	Yantonglazi	39	100	Chosen	100	100.00%
		Songshulin	226	639	Man	136	21.28%
					Chosen	215	33.65%
		Dongala	297	901	Chosen	544	60.38%
Wangqing National Natural Reserve	Fuxing	Duhuangzi	145	298	Chosen	12	4.03%
					Hui	1	0.34%
					Man	3	1.01%

3.2 Social and Economic Situation of Ethnic Minority Villages in the Project areas

3.2.1 Economic Situation of Yangpao Town

The government of Yangpao Man Town is located in Yangmulinzi Village, which is 13 km from Hunchun City, 9 km from the border economic cooperation zone. Yangpao Town is located in terrace area, the soil of which are mainly loess land and yellow soil, including black soil on some mountains. The frost free period lasts 126-157 days. The total area of the town is 232 square kilometers. Forest lands cover 7005

hectares; farm lands cover 1074 hectares, among which dry lands cover 858 hectares. Paddy field cover 379 hectares; animal husbandry lands cover 4166 hectares, water areas cover 208 hectares. There are 7 administrative villages, 39 village teams and 1017 households in total. The total population is 4011; total labor force is 2432. People of Han, Man, Chosen and Hui nationality live here. Among them, the population of Man nationality is 1275, accounting for 31.8% of the total population in the town. The population of Chosen nationality is 1421, accounting for 35.7% of the total. The population of Han nationality is 1304, accounting for 32.49% of the total population in the town. The population of other nationalities is 31, accounting for 0.1% of the total population in the town. The 7 administrative villages in the town are all ethnic villages where people of different nationalities live together.

3.2.2 Population Situation of Ethnic Minority Villages

The population situation of ethnic minority villages is shown in Table 3-2. Among the 3 investigated ethnic minority villages, the total number of households in Yantonglazi Village is 38; the total population is 96; male female ratio is 46:50, the agricultural population is 83; the non-agricultural population is 13. The population proportion at different age interval is: the proportion of people aged 0~16 is 21.9%, the proportion of people aged 16-60 is 22.9%, the proportion of people aged over 60 is 55.2%. This indicates the degree of aging in this village is quite high. In terms of education degree of the villagers, people at primary school level account for 18.8%; people at middle school level account for 27.1%; people at high school and technical school level account for 32.3%; people at and above junior college level account for 6.3%. This indicates that the education level of the village basically conform to the normal distribution.

The total number of households in Dongala Village is 286; the total population is 849; the male female ratio is 458:391; the male is more than the female. The proportion of agricultural population is 85%, the proportion of non-agricultural population is 15%. The population proportion at different age interval is: the proportion of people aged 0~16 is 15.9%; the proportion of people aged 16-60 is 63.6%; the proportion of people aged over 60 is 20.4%. This indicates the labor force in this village is quite abundant. In terms of education degree of the villagers, the illiterate and semi illiterate people account for 2.1%; people at primary school level account for 49.7%; people at middle school level account for 40.4%; people at high school and technical school level account for 7.1%; people at and above junior college level account for 0.7%. This indicates that the education level of the village is relatively low on the whole.

The total number of households in Songlin Village is 226; the total population is 639; the male female ratio is 323:316; the male is more than the female. The population proportion at different age interval is: the proportion of people aged 0~16 is 3.3%; the proportion of people aged 16-60 is 90.9%; the proportion of people aged over 60 is

5.8%. The percent of labor force in these 3 ethnic minority villages is the highest. In terms of education degree of the villagers, the illiterate and semi illiterate people account for 1.6%; people at primary school level account for 9.1%; people at middle school level account for 10.5%; people at high school and technical school level account for 64.9%; people at and above junior college level account for 13.9%. This indicates that the education level of the village is relatively high on the whole.

Table 3-2 Population Situation of Ethnic Minority Villages

village	Population					Age			Education Level (based on the actual investigated people)				
	total households	the total population	male	agricultural population	non-agricultural population	0-16	16-60	60 and above	the illiterate and semi illiterate	primary school	middle school	high school and technical school	junior college and above
Yantonglazi	38	96	46	83	13	21	22	53	0	18	26	31	6
Dongala	286	849	458	722	127	107	427	137	18	422	343	60	6
Songlin	226	639	323	582	57	21	581	37	10	58	67	415	89

3.2.3 Ethnic Nationality Situation in Ethnic Minority Villages

The ethnic population situation in these 3 villages is shown in Table 3-3. It can be seen that people in Yantonglazi Village all belong to Chosen nationality. In Dongala Village, people mainly belong to Han nationality, Chosen nationality and Man nationality. Among them, people of Han nationality account for 35.3%; people of Chosen nationality account for 37.7%; people of Man nationality account for 27%. In Songlin Village, people of Han nationality account for 45.1%; people of Chosen nationality account for 25.7%; and people of Man nationality account for 29.3%.

Table 3-3 Ethnic Nationality Situation

Village	Total population	Han nationality		Chosen nationality		Man nationality	
		population	%	population	%	population	%
Yantonglazi	96	0	0	96	100	0	0
Dongala	849	300	35.3	320	37.7	229	27.0
Songlin	639	288	45.1	164	25.7	187	29.3

3.2.4 Labor Force Situation in Ethnic Minority Villages

The labor force situation in these 3 villages is shown in Table 3-4. In Yantonglazi Village, the total labor force is 28; accounting for 29.2% of the total population. Among them, the female labors account for 57.1% of the total labor force. All labor force belong to agricultural labor force. In Dongala Village, the total labor force is 534; accounting for 62.9% of the total population. Among them, the female account for 40.8% of the total labor force. All labor force in this village belong to agricultural labor force, too. In

Songlin Village, the total labor force is 581; accounting for 90.9% of the total population. Among them, the female account for 43.8% of the total labor force. The agricultural labor force in this village account for 84.5% of the total, and 15.5% of the total labor force are non-agricultural labor force.

Table 3-4 Labor Force Situation in Ethnic Minority Villages

village	statistics	total population	total labor force	female labor force	agricultural labor force
Yantonglazi	number	96	28	16	28
	percentage		29.2	57.1	100
Dongala	number	849	534	218	534
	percentage		62.9	40.8	100
Songlin	number	639	581	280	540
	percentage		90.9	43.8	84.5

3.2.5 Farmers' Income Situation in Ethnic Minority Villages

The income situation is shown in Table 3-5. The per capita net income of farmers in Yantonglazi Village is 12686.2 yuan. The main income sources are agricultural planting, breeding, going out for work, and tourism. Among them, the income from working account for 59.66% of the total income. The per capita net income of farmers in Dongala Village is 10600 yuan, and the income from working is also a major source. The per capita net income of farmers in Songlin Village is 15000 yuan. The income sources are basically similar with the former two villages, while the income from working is a little lower than that from planting.

Table 3-5 Farmers' Income Situation

Village / Income Type	per capita net income of farmers	Farming (%)	Under-forest economy (%)	Breeding (%)	Working (%)
Yantonglazi	12686.2	20.02	17.96	2.36	59.66
Dongala	10600	35.4	2.04	8.35	54.21
Songlin	15000	38.88	16.6	11.13	33.39

3.2.6 Land Situation in Ethnic Minority Villages

Among the 3 investigated villages, forest lands all account for a large proportion. As shown in Table3-6, farmlands in Yantonglazi Village cover 440 mu, without dry lands, all belong to grain field; and forest lands cover 4700 mu; grass lands cover 1800 mu; homestead cover 40 mu; uncultivated lands cover 1800 mu, which is other quite a big area. In Dongala Village, the total area of farmlands is 3864.4 mu, 1814 mu of which are dry lands; 1780 mu are grain field; and 270.4 mu are vegetable field. Compared with farmlands, forest lands cover a larger area, that is, 12500 mu. Grass lands cover 5010 mu; homestead cover 600 mu; uncultivated lands cover 1200 mu. The total area of farmlands in Songlin Village is 6660 mu, 1980 mu of which is dry lands and 4680 mu is grain field.

Table 3-6 Farmlands, Forest Lands and Grass Lands Situation (mu)

village / lands type	farmlands	dry lands	grain field	vegetable field	forest lands	grass lands	homestead	uncultivated lands
Yantonglazi	440	—	440	0	4700	1800	40	1800
Dongala	3864.4	1814	1780	270.4	12500	5010	600	1200
Songlin Village	6660	1980	4680	—	—	—	—	—

3.3 Analysis of Minority Peasants' Livelihood in Project Areas

The income structure of the 3 investigated villages of ethnic minorities is shown in Table 3-7. The income from working for others accounts for 59.66% and 52.21% respectively in Yantonglazi, Dongala Village, taking a large proportion. However, in Songshulin Village, the number is 33.39%. In terms of plantation, people in Dongala Village grow more rice, and corn and soybean as well. People in Yantonglazi grow more corn and soybean, probably no rice. People in Songlin grow the most soybean and corn most, probably no rice either. People in Yantonglazi Village mainly grow corn and soybean, the income from which accounts for 20.02% of the total. People in Dongala Village mainly grow rice, corn and soybean, the income from which accounts for 35.4% of the income. In Songlin Village, people mainly grow soybean and corn, the income from which accounts for 38.88% of the income.

Table 3-7: Revenue Situation of Minority Village in 2014

Town	Village	Percentage of Minorities (%)	Revenue Situation of Peasant Household			
			Under-forest economy (%)	Plantation (%)	Cultivation (%)	Working (%)
Yangpao	Yantonglazi	100	17.96	20.02	2.36	59.66
	Dongala	60.38	2.04	35.4	8.35	54.21
	Songshulin	54.93	16.6	38.88	11.13	33.39

In terms of the dependence of the minority villages on under-forest economy, in each village, there are not too many households that rely on local forestry livelihood like Fungus cultivation, forestry products picking and protection zone pasture. In the 3 villages, 25 households in total cultivate Fungus, accounting for 4.4% of the total households; 50 households in total pick forestry products, accounting for 8.9%; 16 households graze in protection zone, accounting for 2.8%. See Table 3-8.

Table 3-8: Forestry Livelihood Situation of Minority Village

Town	Village	number of involved households	number of involved people	women	households living on planting agaric		households living on gathering under-forest resources		households living on pasturing	
					Total	Percent	Total	Percent	Total	Percent
Yangpao	Yantonglazi	39	100	47	/	/	5	12.82%	/	/

Town	Village	number of involved households	number of involved people	women	households living on planting agaric		households living on gathering under-forest resources		households living on pasturing	
					Total	Percent	Total	Percent	Total	Percent
	Songlin	226	639	323	10	4.42%	20	8.85%	8	3.54%
	Dongala	297	901	416	15	5.05%	25	8.42%	8	2.69%
Total		562	1640	786	25	4.4%	50	8.9%	16	2.8%

3.4 Case Study of Livelihood in Minority Villages

3.4.1 Livelihood Analysis of Yantonglazi Village

In this village, people of the Chosen nationality account for 100% of the total. The investigation found that the households relying on collecting forestry products account for 12.82% (see Table 3-8). People in this village don't cultivate Fungus, neither do they graze in the reserves. Most of them go out for work, including foreign countries, Korea for example, or work in other places of China like Qingdao.

Here below is an interview of a villager:

Column 3-2: Livelihood Case in Yantonglazi Village

Villager A (Chosen): They have 15mu farm lands which have been put out to contract. The other members of the family all go abroad to work. Among the income sources: picking vegetables and mushrooms takes up 4000-6000, and 10,000 for the most; his sons all work abroad and can earn 50,000 one year. The men decide the forest land area, which is a custom of Chosen people. The village is made up of 100% Chosens. It is located in the valley of the protection zone and the growth period of the plant crops is short, so they don't rely much on agriculture.

In the investigation of the village, the researchers found that many villagers were not at home, they mostly work abroad. We can conclude the following points from the interview of the villager: the village is located in the basin of the protection zone, therefore, the crops don't have sufficient photosynthesis, so the agricultural revenue is low, while the forestry products picking accounts for 16.67% ($1/(1+5)$) of the family income. This income percentage does not include forestry farm land income, land contract income, otherwise, the income relied on forestry products picking would be lower.



Fig. 3-2 Yantonglazi village is located in the basin of mountainous forest

3.4.2 Livelihood Analysis of Songlin Village

In Songlin village, the households that rely on Fungus cultivation for livelihood account for 4.42% (see Table 3-8), relying on forestry products picking to increase income account for 8.85%, relying on grazing in forests to increase income account for 1.25% of the village population, the three take up 14.53% in total. The women participating in Fungus cultivation account for 40%, while the number for forest products picking is 50%, which means it is equal for men and women in forestry products picking for livelihood, no woman participate in protection zone pasture.

In terms of livelihood of the Chosen people, the information collected from the women's director and villagers in the investigation are as follows:

Column 3-3: Livelihood Case in Songlin Village

There are Han, Man and Chosen people in this village, the Chosen people nearly all work abroad. Before the implementation of the project, the state laws didn't allow people to go to the mountains. But people would go uphill to pick vegetables, truffles, mushrooms, picking mushrooms for a spring can earn 10,000yuan. One has 30mu farm lands which grow corn and soybean, the income is not stable, sometimes may lose money, the profit of soybean is 100-200/mu. The cows are kept in captivity. Cows in many households in the village have been killed by tigers, but they got the compensation according to compensation policy.

Villager A (Man): there are 45mu farm lands in his family which all grow soybean. They were sold for 30,000yuan in total, but still lost some money. He went back to mountains to pick mushrooms and vegetables. Sometimes picking mushrooms can earn 1000yuan a day. But people in the village dare not go deep mountains in fear of tigers. Combine the investigation of women's director and a Man household, we can conclude that the revenue from traditional crops like soybean and corn are not stable, while picking mushrooms can get a certain revenue in a short time. In consideration of the fact that only 8.85% of the households pick mushrooms, therefore, forestry products picking is not the choice for most households, more people would pick

mushrooms when the weather is favorable and the mushrooms are in high productivity.

3.4.3 Livelihood Analysis of Dongala Village

As is shown in Table 3-3, we can see that the households relying on Fungus cultivation account for 5.05%; those relying on forestry products picking account for 8.42%, while those relying on protection zone pasture account for 2.69%. In order to further know the livelihood in this village, an interview with a villager was made.

Column 3-4: Livelihood Case in Dongala Village

Villager A (Han): his household income is 30,000 in a year. The village is next to the border line, generally people don't go to mountains, because the frontier forces and protection zone are not allowed to get into. His family has 30mu farm lands, they also contracted other people's lands. They plant 50mu rice in total. In the slack season, he would work for others on the mountains, which could earn 5000-6000yuan. Seldom does he have the time to pick mushrooms. He can earn 100yuan/day for work which is fixed, while the income of mushroom picking is not stable. Most people in the village are Han and Man, nearly all the Chosen people go abroad to work. Now there are many tigers, people dare not go to mountains. The contracted land rent for rice growth is 400-500yuan/mu, and the lands are the plow lands of the Chosen households. The ginseng plantation forests for workers next to this village are generally in the collective forest lands in the mountains.

From the interview it can be concluded that almost all the Chosen people in the village have gone outside for work; the livelihood of Han people and Man people are from plantation and local work, because the forestry products picking income is not stable, and the tigers in the mountains pose a great danger. In view of the fact that the village is next to the border line, so the frontier forces and protection zone don't allow people to approach the mountains. All of these restrict the dependence of villagers' livelihood on mountains.

Above all, for the villages where the minorities account for more than a half of the population, almost all the Chosen household would go abroad for work; different villages vary greatly in Fungus cultivation, forestry products picking, and protection zone pasture, but on the whole, the implementation of the project would have some influence on the livelihood if the minority villages. In consideration of women's participating in the two above-mentioned livelihood models, therefore, the implementation of the project will affect the women's participating in household livelihood, such as reducing ways of women's contribution in household revenue.



Fig. 3-3. Captive Chickens in a Household of Dongala Village

4 Vulnerability and Diversity Analysis of Minorities

4.1 Diversity Analysis of Minorities

4.1.1 Diversities Analysis between Minorities

(1) The Ethnic Chosen

China is the neighboring country of North Korea which is closely related and mutually dependent. In history, during the Warring States period and the turning of Qin and Han dynasties, many Chinese moved to North Korea, the Samhan in the south of Chosen peninsula (Ma, Chen and) sent people to China for many times. In order to avoid wars and natural disasters, Chinese and South Chosen people migrated and blended mutually which formed a deep geographical origin.

As one of the ethnic minorities in the northeast of China, the early history of Chosen people dated back to the time when Chu Yuan-chang united the Northeast and established relationships with Chosen peninsula. The time may be even earlier, but few people migrated at that time, the large-scale settlement didn't start either. The large-scale migration began in the 1760s, when many immigrants crossed Tumen River and Yalu River to enter the Northeast China. After the reform and opening-up, the migration began to spread to all provinces, showing the characteristics of strong periodicity. After a century, the Chosen people have formed an ethnic community with a certain scale. Chosen people have their own language, which is generally thought to belong to Altaic language. The values of Chosen people show strong characteristics of Confucianism, which are greatly influenced by the ancient culture of the Central Plains Han.

1. Traditional Culture

There is no national unified religion in Chosen people. They have believers of Confucianism, Taoism, Buddhism among their ancestors, and then believers of Christianity and Catholicism after the end of 18th century. By the end of 19th century, the national religion with anti-aggression in nature appeared, including Cheondoism and Qinglin in the system of "Dongxue religion", Tanjun religion and Great religion in the system of "Tanjun religion". The biggest mark of traditional Chosen costumes are slopping lapels, no buttons and knotting with long cloth bags. The clothes between men and women are greatly different, men wear pants, women skirts. The features of men's clothing are that crotch and trouser legs are very loose, trouser bottoms are tied a knot, which are easy to sit cross-legged; the features of women's clothing are short coats and long skirts, the length of coat is just enough to shut out breasts, the skirts are long enough to touch the heel.

2. Economy

Field investigation found that apart from traditional agricultural livelihood, another important family income of local Chosen households is working outside. According to a Chosen household in survey, all the Chosen young people in the village

have went to Korea for work, the working income accounts for over 80% of the family income. Almost all the farm lands in Chosen households have been put out to contract, the income in agriculture are dependent on under-forest economy.

3. Manners and Customs

a) Language

The common language of the Chosen people is Chosen (the Chosen people in China use standard Chosen of Chosen peninsula, the accent is very similar to the Democratic People's Republic of Korea), with no definite language family. The Chosen language belongs to phonemic orthography, with 40 phoneme letters. When spelling, the phonemes of the same syllable are folded into blocks, forming the square-shaped writing. Before 19th century, Chinese characters were the writing tools of Chosen people. In 15th century, the King Sejong of Chosun Dynasty asked people to finish the Hoon Min Jung Eum, creating the new alphabetic writing.

b) Traditional Festivals

The traditional festivals of the Chosen people and the Han people are almost the same. In Yanbian, the traditional festivals include the Spring Festival, the Lantern Festival, the Tomb-sweeping Day, the Cold Food Festival, the Dragon Boat Festival, the Mid-autumn Festival, the Winter Solstice Festival, etc; the Children's Day on 1st June, the Senior's Day on 15th, August, "State Fair" on 3rd September is another festival that Chosen people value a lot. What's more, there are three family holidays, one year anniversary of child's birth, "returning to sixty" (for 60th birthday), "returning to marriage" (60th year anniversary of marriage).

(2) The Ethnic Man

The Man people have a very long history. The Sushen people recorded in pre-qin ancient books, Louyi (Later Han and the Three Kingdoms), Wuji (Northern dynasty), in the annals of different dynasties after Han, Mohe (Sui, Tang), Jurchen (Liao, Jin, Song, Yuan, Ming), were all ancestors of the Man people. As early as 3000 years ago, after King Wu of Zhou eliminated Shang dynasty, Sushen people took "arrow and stone" to congratulate. In Tang Zhou SAN first year (698), the leader of Sumo tribe in Mohe people Dae Jo young founded the Bohai Kingdom, with a reign of 228 years, which was the first time that Man ancestors established local regime. By the Liao dynasty, Nvzhen wanyan, the descendants of Heishui Mohe who lived in Songhua River Basin, raised an army to suppress Liao under the leadership of Akuta in the 10th year of Tianqing (1114), and established Jin dynasty the next year (1115), with a reign of 119 years, which was the second time that Man ancestors established local regime.

1. Traditional Culture

Man people used to believe in Shamanism, having the customs of worshipping ancestors, sacrificing to heaven and ancestors. Later, influenced by Buddhism, Taoism and Confucianism, their worship targets became diversified. The Man people paid great attention to etiquette.

2. Economy

When investigating the community, we found that Man people shared almost the same livelihood with local Han people, with the source of crop farming, forestry products picking, working and engaging in business, the income structure is diversified, the income level remains the average in the village.

3. Manners and Customs

a) Language

The Man people have language and writing system of their own. Man language belongs to the Tungusic languages in Altaic language family. The Man words were created at the end of 16th century. In Song and Jin dynasties, Nvzhen people used to have their own words, the early Nvzhen words Syllabogram were born out of Chinese characters holophrase, but it had been lost for a long time. At the end of 16th century, Nurhaci unified the northeast parts, he spelt Man pronunciation with Mongolian words, which formed a new written language, called “old Man words”. In Hong Tai Ji period, the Mongolian words were added punctuations to distinguish the pronunciation, which was called punctuated Man or “new Man words”. As an official language, Man had been used in Qing dynasty for a long time, and became widely used throughout the country, it left lots of archives and became a treasure in the Chinese cultural treasure house. After the middle of Qing dynasty, the Man language was gradually abandoned, nearly all the Man people used Chinese northern language, only banners and banner officials must speak Man in some certain circumstances.

b) Traditional Festivals

Many festivals of Man are similar with Han, mainly are the Spring Festival, the Lantern Festival, the Longtaitou Festival, the Dragon Boat Festival, the Mid-autumn Festival. During holidays, the traditional sports activities like pearl ball, vaulting horse, camel jumping, and skating, etc.

4.1.2 Gender Difference Analysis

(1) Minority Women’s Cognition on the Project

According to the investigation statistics in table 4-1, we can see that 55% of the minority households are clear about the protection zone project, 11.6% don’t know too much, 33.3% don’t know this project at all. Among those who are clear about the project, minority women account for 31.3%, men 69.1%; while among those who are not clear about the project, minority men only account for 18.5%, women 58.3%, this means that in the aspect of project cognition, there is obvious difference between minority men and women, which is related with the higher degree of men’s acquisition of external information.

Table 4-1 Minorities' Project Cognition

Project Cognition		Men		Women		Total	
		Number of People	Percent age	Number of People	Percent age	Number of People	Percent age
Know the protection zone construction project or not	Yes	56	69.1%	15	31.3%	71	55.0%
	Not so much	10	12.3%	5	10.4%	15	11.6%
	No	15	18.5%	28	58.3%	43	33.3%

(2) Minority Women's Intentions on Livelihood Alternatives

The project has certain influence on the minority households livelihood, according to the statistics (Table 4-2), 82.7% of men and 87.5% of women would like to participate the Fungus plantation training; 97.5% of men and 20.8% of women would like to participate the online produces sales training, this is connected with the fact that women are more alert to the online shopping, they can't accept immediately.

Therefore, in the relevant livelihood alternatives training, women should get involved in the training as much as possible to increase their participation rate, the training language and methods should be acceptable to women.

Table 4-2 Minority Village's Intentions on Alternative Livelihood Training

Livelihood Alternative		Men		Women		Total	
		Number of People	Percent age	Number of People	Percent age	Number of People	Percent age
Fungus Plantation Training	Yes	67	82.7%	42	87.5%	109	84.5%
	No	2	2.5%	0	0.0%	2	1.6%
	Not care	12	14.8%	6	12.5%	18	14.0%
Online Produces Sales Training	Yes	79	97.5%	10	20.8%	89	69.0%
	No	0	0.0%	24	50.0%	24	18.6%
	Not care	2	2.5%	14	29.2%	16	12.4%

(3) Gender Difference in Minority Livelihood

Gender equality has always been the health index of a country or region's economic and social development. This project pays attention to the gender difference in the livelihood of the minority village as well. But it does not much affect the minority women.

According to the investigation, among all the investigated minority villages and the households that rely on Fungus plantation for livelihood, in Shangcaomao village, the women account for the largest proportion, which is 60%, while the lowest is the Duhuangzi village in Wangqing County, which is 30%, the former being double of the latter. While the proportion of women participation in Fungus plantation is kept between 40%-50%. Thus it can be seen that women's proportion in Fungus plantation is relatively lower than men. While in the livelihood of forestry products picking, the women in Shang Xia Caomao and Fenshuiling village, Hunchun City account for the

largest proportion, which is 60%, the lowest is the Duhuangzi village, Wangqing County, which is 10%, except for the Yangpaoxiang village in Hunchun City, the women participating in forestry products picking proportions are higher than those of men in other minority villages, thus the implementation of the project may restrict the women bring income for families from forestry products picking. Among the minority villages that rely on pasture in protection zone, only the women in Duhuangzi village, Wangqing County graze, accounting for 25%, others in other villages are all men that graze.

The implementation of the project will have certain influence on the livelihoods in villages, the negative influence for peasants of different genders in different minority villages should be balanced in the next step of the project implementation.

4.2 Minority Vulnerability Analysis

The local minorities are mainly Chosen and Man. Like other minorities in China, the Chosen people and Man people are entitled to the specialized policies made by the government, like the *Law of the People's Republic of China on Regional National Autonomy* and the policies issued in autonomous regions. These policies made the customs, languages and cultures win the equal respect. What's more, the constitution stipulates that, all nationalities in the People's Republic of China are equal. The state protects the lawful rights and interests of the ethnic minorities and upholds and develops a relationship of equality, unity and mutual assistance among all of China's ethnic groups, prohibits ethnic discrimination and oppression in any form. Under this great background, Chosen, Man and Han peasants' basic means of livelihood can be effectively guaranteed, the investigation found that the livelihood mode and institution of ethnic minorities are almost the same. The vulnerability influence of the project is mainly reflected in livelihood vulnerability.

4.2.1 Ratio of the Project's Influence on Minority Women's Livelihood in Different Villages

The implementation of the project will affect the daily means of livelihood of minority women, the investigation found that in different minority villages, all the women would work on Fungus plantation of forestry products picking to increase family income. The new construction or extension of the protection zone will restrict the means of livelihood of the neighboring households, such as Fungus plantation and forestry products picking. The calculating result (see Table 4-3) shows that the ratios of Fungus plantation and forestry products picking are almost the same between men and women. In terms of pasture, no minority women are engaged in pasturing.

Table 4-3 Ratio of Affected Minority Women’s Livelihood

Town	Village	number of involved households	number of involved people	women	households living on planting agaric		households living on gathering under-forest resources		households living on pasturing	
					total	Proportion of women	total	Proportion of women	total	Proportion of women
Yang pao	Yantonglazi	39	100	47	/	0%	5	40%	/	0%
	Songlin	226	639	323	10	40%	20	50%	8	0%
	Dongala	297	901	416	15	40%	25	50%	8	0%
Total		562	1640	786	25	49%	70	49%	23	0%

4.2.2 Project Influence on Minorities’ Family Cultures

The nuclear family of Chosen people exists under the outer form of immediate family and composite family, the parent child relation overweighs the conjugal relation. The values of family-oriented and human relations-oriented are kept down in the great social changes. In addition, the culture that “men play the key role in the society while women were confined to the family chores” makes women get arranged for the family livelihood. The investigation found that nearly all the Chosen men go abroad to work, here the men refers to fathers and sons, while women generally stay at home doing farm work. In this strict family labor division, the project will have great influence on the minority women’s livelihood who work on agriculture and family care.

5. Public Consultation and Cognition Development

The public's awareness and participation reflect the transparency of the project operation. A series of surveys and consultations for public opinion were carried out according to the requirement of the World Bank, the State Forestry Administration and local forestry departments. Relevant investigations for public opinions about environmental and social assessment were conducted before the project was started. Then interviews with minority residents in the surrounding area were specially organized. Relevant photos of the interviews are provided in attachment 1.

5.1 Public Consultation and Community Participation in Preparation Phase

Relevant public consultations in communities of Hunchun County, Jilin Province, were conducted from January to March, 2015. This indicates that the people's right to know is paid great attention in the project.

Table 5-1 Public Consultation and Community Participation in Preparation Phase

Subject (Content)	Date	Executive Department	Engaged Local Departments	Locality Participation			
				Place	Number of Subjects		
					Male	Female	The poor
Participated research	January to March, 2015	Experts of Social Assessment	Authority of Jilin Hunchun Siberian Tiger National Nature Reserve	Yantonglazi, Songlin, and Dongala Village	49	33	3

- Subject (content): including but not limited to public consultation in environment assessment; including publicity, communication and preparatory surveys conducted by local governments and forestry bureaus;
- Engaged local departments: if local governments or their departments participate in the project, or get engaged in organization and coordination;
- Place: places where meetings or consultations are conducted;
- If the survey was conducted in households, the number of these households should be listed;

5.2 Participation Rate of Interest-related Stakeholders

According to the environment and social security policies of the World Bank, advance, informed, adequate and free community participation is required in the project. Field survey in the social assessment is important to discover and avoid social risks in the project. It is also an important step of adequate community participation in the preparation stage.

In the social assessment process, multiple forms of notification, social surveys

and community consultation are conducted to key stakeholders involved in this project. Specific research methods and numbers are shown in the following Table:

Table 5-2: Participation Process and Methods of Stakeholders

Interest-related Respondents	Investigation Methods	Times of Investigation	Place of Investigation
Jilin Forest Department and its subordinate departments	meeting and consultation interview with key figures interview with focus groups	6 times 4 times 3 times	Beijing, Changchun Changchun Changchun
Peasants of ethnic minorities in surrounding areas of Jilin reserves	interview with key figures questionnaire interview with focus groups	2 persons 82 copies 1 times	Hunchun City Hunchun City Hunchun City



Figure 5-1 Household Investigation of the Chosen and Manhe Nationality in Chunhua Town and Yangpao Village in Hunchun City

5.3 Overall Public Opinion

On January 26st, 2015, the expert panel conducted a large-scale questionnaire survey in involved ethnic minority villages to collect public opinion and recommendations. The result is shown in Table 5-3.

Table 5-3 Survey Results of Public Opinion

Content	Opinion or recommendation	Percentage (%)
1. Do you know the reserve construction? (single choice)	Invalid answer	3.659
	1 Yes	40.24
	2 Not sure	36.59
	3 No	17.07
2. Do you support the project construction? (single choice)	1 Agree	86.25
	2 Disagree	1.25
	3 It does not matter.	12.5
3. Potential benefits of the project. (multiple choices)	1 Convenient transportation	52.5
	2 Investment opportunities	33.8
	3 Employment opportunities	55
	4 Market information	28.8
	5 Improvement of eco-environment	61.3
	6 Acquisition of new technology about farming and breeding	40
	7 Others	1.3
4. Possible disadvantages of the project (multiple choices)	1 Inconvenient transportation	7.5
	2 Impacts on under-forest economy	47.5
	3 Increasing risks of animal-caused damages	65
	4 Others	21.3
5. Do you know the local compensation policy on animal-caused damages? (single choice)	Invalid answers	3.75
	1 Yes	32.5
	2 Not sure	36.25
	3 No	27.5
6. Do you have any opinion or recommendation about this project? (multiple choices)	1 Reduce demolition as much as possible	17.5
	2 Reduce land requisition as much as possible	56.3
	3 Smooth local transportation as much as possible	57.5
	4 Launch trainings on bee-keeping	20
	5 Launch trainings on forest frog breeding	23.8
	6 Launch trainings on agaric planting	45
	7 Launch trainings on tobacco planting	22.5
	8 Launch trainings on online sales (e-commerce training)	23.8
	9 Launch trainings on vocational techniques (eg. hairdressing, welding, excavating machinery)	31.3

Content	Opinion or recommendation	Percentage (%)
	10 Others	12.5

82 households are investigated in this survey. 66.4% of these households are ethnic minorities, and others are Han people in the four villages.

5.4 Do you know the Reserve Construction

Ethnic households' awareness of the project concerns the public opinion during the project implementation. Thus the investigators conducted this survey and the result is shown in Table 5-4. Peasants who know clear about the project account for 78.8%; those who don't know it well account for 17.5%; and 3.8% of the answers are invalid.

According to the statistics, a large percent of ethnic villages are covered by project publicity. However, there are also some peasants who do not know clear about the project. The women' director of Songlin Village said in the interview: "there are 260 households in the village. They thought the reserve construction has less relation with their interests, so they just hear about it, but not know it well." Thus, publicity should be enhanced in next stage of implementation, especially about the positive impacts of the project construction on peasants' daily life.

Table 5-4 Do You Know the Reserve Construction

Result	Times	Percentage
Invalid answers	3	3.8
Yes	63	78.8
No	14	17.5
Total	80	100.0

5.5 Do You Support the Project Construction?

Awareness of a project is not equal to support the project. Thus, the investigators conduct the questionnaire survey to figure out whether peasants in ethnic villages support the project or not. The result is shown in Table 5-5. Households in favor of the project account for 86.3% of the total surveyed households. Only 1.3% of the households do not support the project and other 12.5% answers are invalid.

The statistics show that most households in the ethnic villages hold positive attitude towards the project construction. Only one household does not support the project. On the whole, peasants' support the project construction. For the households who do not support the project, we shall actively provide explanation for them.

Table 5-5 Do You Support the Project Construction?

Answer	Times	Percentage (%)
Yes	69	86.3
No	1	1.3
Invalid answers	10	12.5

Total	80	100.0
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5.6 Potential Benefits the Project Would Bring

The potential benefits of the project lie in various aspects of economic and social development, mainly including transportation, investment opportunities, employment opportunities, market information, ecological environment and new farming and breeding technology. The survey results are shown in Table 5-6. 52.5% of the surveyed households hold positive attitude to impacts on transportation of the project; 47.5% of them hold the opposite attitude; both of them accounts for a large percentage. Thus during the project implementation, their concerns should be taken into consideration as much as possible. As for investment opportunities, 33.7% of surveyed households hold positive attitude and 66.3% of them hold the opposite attitude. This reflects the low recognition of peasants on investment opportunities. The result accords with these peasants' perception in that the project might reduce their means of livelihood.

As for employment opportunities, 55% of these peasants believe the project will bring more job opportunities; however, 45% of them hold the opposite attitude. Thus, more jobs should be created for peasants as much as possible during the implementation of the project, such as providing reward to those who help to patrol for forest farms. In terms of market information, 71.3% of these peasants do not think the project would bring them more market information. The result is closely related to project orientation. This project aims at creating better environment for the Siberian Tiger, while the market information emphasizes commercial information. From the perspective of sustainable means of livelihood, the project can still provide some commercial information. For example, the corporation between Chaoyanggou Forest Farm of Dongning County in Heilongjiang Province and World Wide Fund, the fund provider of this project, in selling local special products is effective way of providing market information. As for improving the eco-environment, over 60% of these peasants believe hold positive attitude. This reflects that most peasants think the project will bring positive impacts on the environment. As for whether the project will help them to acquire new farming and breeding technology, more than 60% of these peasants hold negative attitude. Thus, some technical trainings on farming and breeding should be provided for them to multiply their livelihood means and get their support towards the project.

Table 5-6 Will the Project Bring Some Benefits?

Choices	Convenient transportation	Investment opportunity	Employment opportunity	Market information	Environment improvement	New farming and breeding technology acquisition
Yes (times)	42	27	44	23	49	32
No (times)	38	53	36	57	31	48
Yes (%)	52.5	33.7	55	28.8	61.3	40
No (%)	47.5	66.3	45	71.3	38.8	60

5.7 Survey on Possible Disadvantages the Project Might Bring

Any project will bring about positive impacts and negative impacts during its implementation. Based on the investigation of ethnic villagers, it's found that negative impacts of the project mainly include inconvenient transportation, impacts on under-forest economy, increasing risks of animal-caused damages of crops, and other disadvantages. The detailed results are shown in Table 5-7.

As for transportation, only 7.5% of the villagers think the project will lead to inconvenient transportation, indicating an overall positive recognition towards the project in terms of transportation. In terms of under-forest economy, 47.5% of the villagers believe that the project will have adverse effects on under-forest economy. This relatively high ratio illustrates that concerns about under-forest economy have to be well solved. As for increasing risks of animal-caused damages of crops, 65% of the villagers worry about that. They think the reserve construction will increase the number of wild animal populations and thus increase risks of animal-caused damages of crops. This conforms to general presumption.

Table 5-7 Possible Disadvantages of the Project

Answer	Inconvenient transportation	Impacts on under-forest economy	Increasing risks of animal-caused damages of crops	Others
Yes (times)	6	38	52	18
No (times)	7.5	47.5	65	22.5
Yes (%)	74	42	28	62
No (%)	92.5	52.5	35	77.5

From Table 5-8, it can be seen that most respondents know the compensation policies on animal-caused damages well. However, 27.5% of these peasants remain unclear about the policies. Therefore, the publicity of compensation policies on animal-caused damages needs to be further enhanced.

Table 5-8 Do you know Local Compensation Policies on Animal-Caused Damages?

Answers	Times	Percentage
Invalid answers	3	3.8
Yes	55	68.8
No	22	27.5
In total	80	100.0

5.8 Opinions and Recommendations

To better carry out the project, opinions and recommendations of these peasants are collected and the results are shown in Table 5-9.

82.5% of these peasants hold negative attitude towards reducing demolition as much as possible, which shows that most villagers hope to move to new places. 56.25% of these peasants wished hold positive attitude towards reduce land requisition as much as possible, which shows many of them hope to maintain their farmlands. Though their farmlands may be located within the reserve area, the project executive unit shall comprehensively consider about the issue. Because farmlands are still foundations of peasants' livelihood in China. As for transportation, 57.5% of these peasants hope the project will help to make transportation convenient. It shows that villagers hope the project will improve local infrastructures including road and transportation. However, 42.5% of them do not hope the current transportation will be changed. This may be due to some residents' attitude towards the negative impacts of the project.

As for conducting trainings on keeping bees, 80% of these peasants hold negative attitude because local government has offered such trainings. As for conducting trainings on keeping forest frogs, 76.25% of them do not agree with that due to the same reason as above. As for conducting trainings on agaric planting, 55% of them hold negative attitude and 45% of them have opposite attitude. The results show that though the scale of agaric planting is quite large in local region, peasants still have the demand to refine agaric planting techniques. As for conducting trainings on flue-cured tobacco planting, 77.5% of these peasants hold negative attitude, which is due to the government's policy of restricting tobacco cultivation. Thus peasants have less demand for techniques about planting tobacco. As for conducting trainings on electronic business and vocational and technical training, peasants who hold unsupportive attitude account for 76.25% and 68.75% respectively. This is because these contents are not involved in the publicity period.

Table 5-9 Opinions and Recommendations

Items	reduce demolition as much as possible	reduce land requisition as much as possible	make transportation as convenient as possible	conduct trainings on bee keeping	conduct trainings on forest frog breeding	conduct trainings on agaric planting	conduct trainings on flue-cured tobacco planting	conduct trainings on electronic business	conduct vocational and technical trainings
Yes (times)	14	45	46	16	19	36	18	19	25
No (times)	66	35	34	64	61	44	62	61	55
Yes (%)	17.5	56.25	57.5	20	23.75	45	22.5	23.75	31.25
No (%)	82.5	43.75	42.5	80	76.25	55	77.5	76.25	68.75

6. Impacts of the Project on Ethnic Minorities

The project aims to create better environment for the Siberian Tiger. During the implementation, it will inevitably bring about impacts on the livelihood and culture of ethnic minorities around the newly-built and expanded reserves.

6.1 Positive Impacts

6.1.1 Increase Jobs

Infrastructure construction, such as protection stations, is involved in newly-built and expanded reserves. Thus the project executive unit can provide nontechnical jobs for ethnic minorities and they are competent to these jobs.

6.1.2 Enhance the Compatibility between Human and the Environment

Through publicity in earlier stage of the project, ethnic minorities recognize the positive meaning in protecting wildlife, such as the Siberian tiger. Their awareness of protecting the Siberian tiger is improved through this project.

6.1.3 Improve Infrastructure Construction and Raise the Livelihood and Production Quality

The road construction of the project will make travelling more convenient for ethnic minorities. Take Yantonglazi Village in Hunchun City as an example, the entire village is located in the mountainous area of the reserve. The muddy road would become worse in rainy days, which make travelling more difficult for these villagers. The project will effectively improve the convenience of travelling.

6.1.4 Provide More Market Information

Due to sound cooperation, Chaoyanggou Forest Farm of Dongning County in Heilongjiang Province and World Wide Fund have discussed in building large supermarkets to sell organic agricultural products of peasants and forest farm workers. If this mode can be introduced into ethnic minority villages, it will not only help to protect wildlife, but also offer better livelihood for peasants of ethnic minorities.

6.2 Negative Impacts

6.2.1 Restrict the Under-forest Economy

Due to the project, protection of these reserves will be strengthened and the number of wild Siberian tigers and leopards will increase. Ethnic minorities' under-forest economy, such as collecting fungus, will decrease due to their fear of wild animals, which will affect their sources of livelihood. For example, during the investigation a forest farm worker said that some households make their living on picking fungus, and some of them would earn 10,000 yuan per month. But they could only earn 1000 yuan per mu by farming in one year. It can be seen that the implementation of the project has great influences on peasants who live on under-forest economy.

6.2.2 Increase the Cost of Agaric Planting

Although most of the sawdust used to plant agaric are imported or from outside areas, the cost of sawdust will increase with the demand as more households start to plant agaric. The project construction and prohibition on logging will both constrain the local output of sawdust. Based on the investigation, the price of fungi bag will rise 20% in Mudanjiang prefecture; cost price of sawdust will rise $0.41 \times 0.2 = 0.08$ yuan per bag. Cost of black fungus is 1.1 yuan per bag; the output value is 2.4 yuan per bag; the profit will be 1.2~1.5 yuan per bag. The cost of black fungus will rise 0.1 yuan per bag after the price of fungi bag rises.

6.2.3 Increase the Risk of Animal-caused Damages

The construction and patrolling will significantly help to perfect the food chain of the Siberian Tiger, and more damages will be caused by wildlife as well. Compensation methods for animal-caused damages are introduced in Jilin Province. There is no such policy in Heilongjiang province yet.

6.2.4 Influence Contribution of the Female to Their Families

In households of ethnic minorities, usually the man (the husband) deal with social affairs and the woman (the wife) mainly deal with domestic affairs, especially for people of Chosen nationality. The female are in charge of domestic livelihood, such as picking fungus and *Tricholoma matsutake* in the forest. After the project is implemented and under-forest economy is restricted, the female's contribution to family would fall, which will affect the livelihood structure of ethnic minorities families to some extent.

7. Action Plan

Most villages around the project area are inhabited by ethnic minorities and Han people. Due to the national region autonomy policy, customs of ethnic minorities are basically remained. Their livelihood is different from that of Han peasants and the project will also have different impacts on them.

7.1 Reduce Ethnic Minorities' Dependence on Under-forest Economy

Following measures are proposed with regard to restriction on ethnic villagers' picking fungus and *Tricholoma matsutake* in the reserves:

1) Trainings on alternative means of livelihood for ethnic households shall be provided. Local forest departments shall provide trainings for ethnic minorities on starting business and diversified means of livelihood.

2) More jobs shall be provided for ethnic villagers during the project implementation. For example, ethnic minorities could be employed to work as daily patrollers after the reserves are established.

7.2 Control Risks of Animal-Caused Damages

After the project is implemented, the population of wildlife will increase. This will have some impacts on ethnic minorities. For example, the wild boar may damage their crops and tigers may hurt people. Warning signs shall be set in places where wild animals may appear and make compensation for animal-caused damages.

7.3 Establish the Co-Management Agreement in the Experimental Zone between Peasants and Forest Farms

The functional division of experimental zone, buffer zone and core area will be furthered clear after the project is implemented. The experimental zone is on the periphery of nature reserves and can be used for scientific experiments and tourism. Thus the co-management agreement in the experimental zone between peasants and forest farms can be established, that is, peasants are allowed to pick firewood and it needs the supervision of nature reserves. This can help to achieve energy security and sustainable usage of peasants. In places where tigers and leopards may appear, warning signs shall be set.



Figure 7-1 Warning Signs of Tigers and Leopards

Aiming at potential impacts of the project on peasants of ethnic minorities, improvement measures as follows shall be taken:

Table 7-1 Action Plan of Ethnic Minorities Development

Impact type of original livelihood mode	Number of involved households	Specific improvement measures	Involved people	Specific action	Source of fund
decrease of sawdust to plant agaric	25	training on planting under-forest panax ginseng	50	Employ experts from Hunchun Forestry CO., Ltd of Changbaishan Sengong Group and Ji'an Mayihe Panax Ginseng Co.,Ltd. to conduct training on planting ginseng for ethnic minorities and the female.10 times, 500 yuan per time.	fund of training and capacity building
decrease of sawdust to plant agaric		training on planting angelica	30	Employ experts from Hunchun Forestry CO., Ltd of Changbaishan Sengong Group to conduct training on planting angelica for ethnic minorities and the female. 15 times, 600 yuan per time.	fund of training and capacity building
decrease of sawdust to plant agaric		training on planting Radix paeoniae rubra and rhizoma gastrodiae	40	Employ experts from the Research Institute of Northern Specialty and Horticulture to conduct training on planting angelica for ethnic minorities and the female.10 times, 500 yuan per time.	fund of training and capacity building
decrease of sawdust to plant agaric		training on planting Platycodon grandiflorum and Adenophora stricta	35	Employ experts from Hunchun Forestry CO., Ltd of Changbaishan Sengong Group to conduct training on planting Platycodon grandiflorum and Adenophora stricta for peasants. 10 times, 600 yuan per time.	fund of training and capacity building
decrease of sawdust to plant agaric		training on planting Astragalus mongholicus and cortex dictam	40	Employ experts from Jilin Agricultural University to conduct training on planting angelica for ethnic minorities and the female.10 times, 800 yuan per time.	fund of training and capacity building

Impact type of original livelihood mode	Number of involved households	Specific improvement measures	Involved people	Specific action	Source of fund
prohibition of pasture in nature reserves	16	training on keeping bees	20	Employ experts from Changbaishan Chinese Herbal Medicine Association to conduct training on bee-keeping and lead the ethnic minorities and the female to develop green and pollution-free industry. 10 times, 500 yuan per time.	fund of training and capacity building
potential restriction of picking firewoods	0	——	——	Allows the ethnic minorities to collect firewood in state-owned forest farms and the experimental zone of nature reserves. But they need to improve defensive awareness. Recommend that peasants collect firewood in groups.	——
impacts of animal-caused accidents	16	strengthen the patrolling and on-site investigation	——	To formulate compensation recognition and methods for animal-caused accidents in Heilongjiang Province by referring to the <i>Regulations on Compensation for Physical or Property Damage Caused by Terrestrial Wildlife Animals under Special Protection</i> of Jilin Province and the <i>Implementing Rules of Regulations on Compensation for Physical or Property Damage Caused by Terrestrial Wildlife Animals under Special Protection of Jilin Province</i>	Financial Fund
restriction of picking mushroom and potherb	50	——	——	Allow the ethnic minorities to collect mushrooms and potherbs in state-owned forest farms near the reserves. Set warning signs at places where tigers and leopards may appear. (Eg: Figure 7-1). Recommend that peasants enter the mountain in groups.	——

8. Monitoring of Impacts on Ethnic Minorities

8.1 Arrangement of Monitoring and Assessment Institutions

Monitoring and assessment of the project includes self-monitoring and assessment, and that of independent institutions. Responsibilities and obligations of different organizations and stakeholders are shown in the Table 8-1 as below.

Table 8-1: Organization Arrangement of Monitoring and Assessment

Relevant Institutions	Roles in the Monitoring and assessment	
	Self-Monitoring and assessment	Assessment of Independent Monitoring Institutions
The State Forestry Administration, provincial forestry departments, bureaus of forestry industry	organizer and coordinator	organizer and coordinator
County and city forestry bureaus, state-owned forest farms, protection stations	executor	organizer, coordinator, and information provider.
Neighborhood committee and village committee in peripheral areas of the reserves; Rural households and residents in peripheral areas of the forest farms; Each nature reserves Forestry departments and other relevant departments of county government	coordinator and information provider	coordinator and information provider
Monitoring institutions of the project	-	executor

8.2 Contents and Indicators in the Monitoring and Assessment

Based on the adaptability analysis of ethnic minorities, the negative impacts and improvement plans, the main contents of the monitoring and assessment are the following:

- To carry out tracking monitoring and assessment of social management plan based on the monitoring and assessment indicators of impacts on ethnic minorities.
- To analyze and evaluate the actual benefits, influences and risks according to the investigation results of the tracking monitoring.
- To focus on the implementation of mitigation measures to eliminate negative effects of the project, and put forward timely measures to eliminate obstacles which impede the achievement of social goals, and adjust the plan appropriately if necessary.
- To recognize and analyze social problems and risks in the project and put forward measures and recommendations of correction and improvement.

Estimated indicators of monitoring and assessment are shown in the following Table 8-2:

Table 8-2: Monitoring and Assessment Indicators

Types of Indicators	Objectives	Core Indicators
indicators of project implementation and construction	To know the project progress	The implementation construction contents, time, place, financial management, resources management, staff management and engineering management of the project.
Indicators of Project Input and Output	To know the project progress	Total amount of capital input, structure of capital sources, fields and structure of capital investment; direct and indirect output of the project
System Set-up	To improve the feasibility of the project	The establishment of animal accident compensation mechanism; The establishment of appeal and complaint mechanism; Changes of management mechanism in national forests and reserves; Changes of interest sharing mechanism between ethnic minority communities and nature reserves.
Social Effects	To improve the feasibility of the project	Income structural and quantitative changes of peasant households; Income structural and quantitative change of the impoverished households; The contribution of female members in family livelihood;
Social Risks	To improve the feasibility of the project	Quantity of animal accidents and compensation standard, and whether the standard meets demands of the impaired party; Willingness of ethnic minority residents to continue collecting forestry products in the reserves; Confiscation of hunting tools and handling of hunting cases; Situation of adopting alternative techniques in agaric planting.
Public Participation	To improve the feasibility of the project	Awareness rate, participation willingness and satisfaction degree of ethnic minority households.
Stakeholders	To improve the feasibility of the project	To focus on analyzing the awareness rate, participating willingness and satisfaction degree of all stakeholders.

8.3 Budget of the Develop Program of Ethnic Minorities.

The budget of the *Develop Program of Ethnic Minorities* is 2448025 yuan.

Table 8-3 Project Budget and Expenses

Project Action	Implementation Units	Implementation Time	Estimated Scale and Description	Budget Content	Source of Fund	Investment (yuan)	Fund Budget (yuan)	Main Monitoring and Assessment Target
1. Construction of the village project implementation commission	county forestry department, state-owned forest farms and villager's committee	project preparation period	Yantonglazi, Songshulin and Dongala Village	fund of building and operation the committee		10000	30000	In the village project implementation commission, members of the Chosen nationality are not less than 35% of the total; Man not lower than 35% and Han members not lower than 30%. The female representatives are not lower than 25%. The commission members are elected by peasant representative community meeting.
2. Training for households of ethnic minorities	county forestry department, state-owned forest farms and villager's committee	project implementation period	215 person-time (41 households in 3 villages are involved; at least 1 people in each household should attend the training, about 5-6 times. 70 women are involved.)	training fee	project budget	385	82775	Participation rate of ethnic minorities in training is not lower than 80% and the satisfaction level towards the training is not lower than 80%.

3. Ginseng planting	village project implementation Commission	project implementation period	25 households in 3 villages; 2 bags of ginseng seeds for each household. The project subsidize 255 yuan and peasants raise 255yuan by themselves.	purchase seeds of ginseng	project budget and self-raised fund of peasants	1020	25500	Peasants' satisfaction level towards ginseng planting is not lower than 80%.
4. Chinese angelica planting	village project implementation Commission	project implementation period	25 households in 3 villages; 1.5 kg of Chinese angelica seeds for each household. Peasants raise 110 yuan by themselves	purchase seeds of Chinese angelica	self-raised by peasants	330	8250	Peasants' satisfaction level towards Chinese angelica planting project is not lower than 80%.
5. Rhizoma gastrodiae planting	village project implementation Commission	project implementation period	25 households in 3 villages; 100 kg of rhizoma gastrodiae seeds for each household. The price is 60 yuan per 500g; 30 yuan of which will be self-raised fund by peasants and 30 are from project budget.	purchase seeds of rhizoma gastrodiae	project budget and self-raised fund of peasants	12000	300000	Peasants' satisfaction level towards rhizoma gastrodiae planting project is not lower than 80%.

6. Platycodon grandiflorum planting	village project implementation Commission	project implementation period	25 households in 3 villages; 3 kg of platycodon grandiflorum seeds for each household. The price is 90 yuan per 500g; of which 45 are self-raised fund of peasants and 45 are from project budget.	purchase seeds of platycodon grandiflorum	project budget and self-raised fund of peasants	540	13500	Peasants' satisfaction level towards platycodon grandiflorum planting project is not lower than 80%.
7. Cortex dictam planting	village project implementation Commission	project implementation period	25 households in 3 villages; 60 kg of cortex dictam seeds for each household. The price is 550 yuan per 500g; of which 200 are self-raised fund of peasants and 350 are from project budget.	purchase seeds of cortex dictam	project budget and self-raised fund of peasants	66000	1650000	Peasants' satisfaction level towards cortex dictam planting project is not lower than 80%.
7. Astragalus mongholicus planting	village project implementation commission	project implementation period	25 households in 3 villages; 2 kg of cortex dictam seeds for each household. The price is 190 yuan per 500g; of which 95 are from self-raised fund of peasants and 95 from project	purchase seeds of astragalus mongholicus	project budget and self-raised fund of peasants	760	19000	Peasants' satisfaction level towards astragalus mongholicus planting project is not lower than 80%.

			budget.					
8. Staff training for project implementation and management institutions, including county forestry department, state-owned forest farms and village project implementation commission.	county forestry department, state-owned forest farms and experts of assessment, consultation and training	throughout the project	30 person-times, (training by stage, including project preparation, implementation, operation and maintenance stage. 5 times by county forestry department and 4 times by village project implementation commission)	training fee	project budget	300	9000	The training plan and record are completed. During the training, the absence rate should not be higher than 15%. The trainee's satisfaction level towards the training is not lower than 80%.
9. Community participation and community negotiation in project implementation	county forestry department, state-owned forest farms and village project implementation Commission	project implementation period	3 villages of ethnic minorities	community negotiation fee	project budget	—	10000	Participation rate of peasant representative in community negotiation is not lower than 40%. The female representatives shall account for not lower than 20% of the total. The awareness rate of community towards the project

on process and the formulation of project implementation scheme.								implementation scheme is not lower than 90%. The satisfaction level t is not lower than 80%.
10. Project monitoring and evaluation of	the assessment experts of the third party	throughout the project	The monitoring and assessment of the third party of the <i>Develop Program of Ethnic Minorities</i> . (once each during and after the project implementation period)	The participatory monitoring and assessment fee.	project budget	—	300000	
In total							2448025	

8.4 Sources of Expenditure and Budget

In order to ensure that all actions and guarantee measures of the *Develop Program of Ethnic Minorities* can be implemented, and without including the budget of project construction, the fund mainly comes from:

1. Project construction and other fees in the project investment budget.
2. Matching investment of relevant functional department of the government for public finance funds project.
3. Self-financing fund.
4. Matching investment of local government.
- 5.

8.5 Annual Project Investment Plan

The annual investment plan starts from June, 2015 and ends in June, 2018.

Table 8-4: Annual Project Investment Plan

Demonstration Village	Project Action	Fund Budget (yuan)	Estimated Time to Invest
Yantonglazi, Songshulin and Dongala Village of Yangpao Town	1. Construction of the village project implementation commission	30000	At the beginning of June, 2015
	2. Training for households of ethnic minorities	82775	June to December, 2015
	3. Ginseng planting	25500	June to December, 2015
	4. Chinese angelica planting	8250	June to December, 2015
	5. Rhizoma gastrodiae planting	300000	January to June, 2016
	6. Platycodon grandiflorum planting	13500	January to June, 2016
	7. Cortex dictam planting	1650000	June to December, 2016
	7. Astragalus mongholicus planting	19000	January to June, 2017
	8. Staff training for project implementation and management institutions.	9000	June to December, 2017
	9. Community participation and community negotiation in project implementation process and the formulation of project implementation scheme.	10000	June to December, 2015
10. Project monitoring and evaluation of	300000	2015-2018	
	In total	2448025	