

Assessment of Forest Tenure Trade Centers in Guizhou Province



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Assessment of Forest Tenure Trade Centers in Guizhou Province

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**State Forestry Administration of China
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1. Introduction

1.1 Problem Description

The reform of collective forest ownership is the fundamental approach to expediting forestry development, vitalizing the economy of forest regions and enriching the mass of forest farmers. In order to expedite forestry development, since December 2006, Guizhou province has started pilot reform of collective forest ownership in 9 counties such as Jinping County (Municipality, District and Special Zone). Since December, 2007, the reform of collective forest ownership was carried out throughout the province. At present, the ownerships of 8.5333 million hm^2 of forests and corresponding boundaries have been clarified in the whole province, which accounts for 97% of the total forest area for ownership reform, and issued (changed) over 2 million total certificates of forest ownership. To the end of 2009, more than 95% of the forests for collective ownership reform have been issued ownership certificates in the province, indicating the reform is basically complete.

There are 8.7667 million hm^2 of forest lands in Guizhou Province which will be included in the reform, and over 8 million forest farmers have got or will get an average of about 1.096 hm^2 of forest lands, after these are done, the phenomena of “missing elements” among the elements of forestry production will come up. After the reform of forest ownership is finished, the issues of how to realize the economic value of forest ownership, to lead all the production elements flow into the direction favorable to forestry development, to optimize the deployment of production elements, to motivate the enthusiasm of forest managers and all forces of society, to increase the input to forestry, and to achieve sustainable forest management, trading of forest ownerships will come to the fore. Therefore, as pilot counties for forest ownership reform, other reforms were started to support the ownership reform, among them Jinping county of Qiandongnan Prefecture carried out pilot trials on transfer of forest ownerships.

Qiandongnan Miao and Dong Autonomous Prefecture is located in the southeast of Guizhou Province, bordering Huaihua Prefecture of Hunan Province in the east, Qiannan Buyi and Miao Autonomous Prefecture in the west, Liuzhou and Hechi prefectures of Guangxi Zhuang Autonomous Region in the south, Zunyi and Tongren prefectures in the north. It covers an area of 30,300 km^2 , administering 15 counties, 1 municipality, 1 economic development district, 205 towns and townships, and 3228 administrative villages. It houses 33 ethnicities, including Miao and Dong. The population of the whole autonomous prefecture is 4.446 million; the minority is 3.64 million, accounting for 81.9% of the total. Among it, Miao nationality is 1.871 million, and Dong nationality is 1.416 million. The fiscal revenue of Qiandongnan Prefecture

in 2008 was RMB 2.372, the expenditure was RMB 8.944.

Qiandongnan Prefecture is one of the key forest regions with collective ownerships in south China, and also the key forest region of Guizhou Province, with 8 out of 10 key forest counties of the province being in Qiandongnan Prefecture. There are 2.2038 million hm^2 of forest lands in total in the prefecture, accounting for 72.6% of the total land area of 3.0355 million hm^2 , and including 67,900 hm^2 of state-owned, and 2.1359 million hm^2 of collective-owned. Except the pilot county of Jinping, 2.0004 million hm^2 of collective-owned forest lands were included in the reform for nation-wide unified certificate of forest ownership by clarifying demarcation and ownership, accounting for 96.3% of the total forest lands in the prefecture. The collective-owned forest lands included in the reform for ownership certificate by clarifying ownership involves 15 counties (municipalities), and 195 towns and townships, 3076 villages and 25,780 farmer groups in one development district.

Based on the pilot trials of transfer of forest ownership in Jinping County in Qiandongnan Prefecture,, a prefectural center for trading and management of forest ownership was founded, with main functions to collect and publish information on wood supply, transfer of forest lands and forests, mortgage on certificate of forest ownership, market quotations and other duties; to provide consulting services on law, regulation and policy; to provide forestry technical services; to guide, commission and supervise counties (municipalities) to carry out transfer activities of forest lands and forests; to organize timber auction activities throughout the autonomous prefecture; to deal with affairs relating to permit and quarantine certificate for transporting timber to other provinces.

By the end of 2009, Guizhou Province has established county level trading institutions of forest ownership, including 4 trading institutions established by the integrated service center, respectively located in the Jianhe County, Jinping County, Huangping County, and Liping County of Qiandongnan. Before a new round of forest reform, the transfer of forest ownership dropped behind its target, the transaction market of forest ownership was not performing well; there were some sporadic transactions, basically proceeded in private by forest farmers, with non-standard transaction formalities, leading to the poor protection of interests of forest farmers; enterprises and timber owners harvested all trees in 2-3 years, and returned the forest lands to forest farmers or the collectivity. Purchasers profited from the timbers, the interests of forest farmers were not secured, therefore weakening the force for developing forest resources. The village collectivity conducted auctions of timbers after harvesting, in order to get higher profit, however, the forest management still lacked funds; The transfer of land use rights was delayed, however most people were still expecting this transfer to take place. The achievements of the reform of collective forest ownership face serious challenges.

Therefore, to enhance the assessment of experiences and lessons learned from the trading centers of forest ownership in the forest ownership reform counties of Qiandongnan Prefecture of Guizhou Province, to understand social factors that constrain appropriate trading of collective forest ownership, and to explore effective measures to establish a sound trading system for collective forest ownership, it is necessary to safeguard the legitimate rights and interests of forest farmers, rationalize the forestry management system and develop an innovative mechanism of forestry operation. The results of these studies have significant implications for the government to improve related policies, to improve the scientific basis for decision-making and to consolidate the achievements of the reform of collective forest ownerships.

1.2 Literature review (Including existing policies, laws and regulations)

The main way to benefit forest farmers directly is to conduct the transfer of forest ownership in a normal, standard and orderly way, based on clarification of rights, liabilities & profits and roles of management entities. Therefore, the transfer of forest ownership becomes a big concern. At present, many scholars focus on: implications of transfer of forest ownerships; definition of buying and selling bodies of the ownership transfer; preconditions for and models of transfer of forest ownership; problems existing in transfer of forest ownership; and development of mechanisms for effective ownership transfer and supporting reforms in related areas. However, the question is how to develop such supporting reform measures which are favorable to the transfer of forest ownerships of forest farmers based on realistic conditions and avoid policy exclusions and conflicts. Also systematic studies which can bring tangible benefits for forest farmers are relatively weak, so in depth studies on how to eliminate worries of forest farmers and what model of transfer (Such as trading centers of forest ownerships or other trading) can be used to achieve benefits for all stakeholders of forestry development become the issues for further studies.

To consolidate the achievements of the reform of collective forest ownership, the central and local governments, according to the needs of forest ownership reform, actively attempted supporting reforms in related areas, especially some useful explorations in policy-making, as well as formulation of operational rules and development of trading centers focused on trading centers of forest ownership (See appendix 1 for titles of documents of forest ownership reform issued by local governments). To standardize trading activities, on November 23, 2009, the China Forestry Property Exchange was formally launched in Beijing, some counties in 9 provinces, namely: Jiangxi, Fujian, Heilongjiang, Liaoning, Shaanxi, Henan, Yunnan, Guizhou and Sichuan have set up forest tenure trade centers (FTTC), attempting at the operation and innovation in trading center of forest ownership. However, the scale of

forest ownership transfer was restricted, which hampered intensive management in forestry; The operating mechanism and corresponding regulations of transfer of forest ownership differed among different regions, , resulting in questions about the fairness of the transfers , therefore, a unified and standard policy guidance is urgently needed ; Forest farmers were lacking the knowledge of trading centers, and their enthusiasm in the transaction was not high. The development of trading centers of forest ownership is still at the initial or trial stage, and systematic studies on trading centers are still weak. Therefore, strengthening the assessment of experiences and lessons learned from the forest ownership trading centers and land use right in forest-ownership reform counties have significant implications in accelerating the transfer of forest ownership, increasing revenue of forest farmers, optimizing production elements, achieving large scale forest management , developing forestry industry, achieving harmonious development between human and nature, and consolidating the achievements of forest ownership reform.

2. Goals and Methods

2.1 Goals

This paper, by case studies of forest ownership trading and analyses of FTTC in Guizhou province, is to achieve the following goals: (1) Assess experiences and lessons learned from trading centers of forest ownership in forest reform case county of Qiandongnan Prefecture, (2) Analyze the internal advantages and disadvantages, external opportunities and challenges of development of forest ownership trading centers in counties for the case studies , (3) Develop proposals for improvement of policies, laws and institutions to enhance the functions and roles of the FTTC.

Expected achievements of the project are in four aspects: 1) Improvement of the efficiency of the cooperatives of forest farmers, 2) Improvement of the efficiency of trading of forest ownership and land use rights in the trading centers, 3) Participatory and sustainable forestry management, 4) Establishment of an information exchange platform for forest ownership reforms in both China and other countries.

2.2 Methods

During the investigation of case studies in Qiandongnan Prefecture in Guizhou Province, Participatory rural appraisal (PRA) was used as the main method, specifically including literature reviews, questionnaires (including forest farmers, timber merchants, timber processing enterprises, staffs of collective forest farms and trading centers), semi-structured interviews (Survey outline of government and forestry sector of province, prefecture, county and township (town)), event handling interviews (cases of forest ownership transfers), Maps and charts of community

resources, ranking and scoring of satisfaction of forest ownership trading centers, commodity chain analysis (Forest farmers - timber merchants - wood processing enterprises) and SWOT analysis (FTTC), used to collect information of FTTC and their stakeholders.

Table 1 List of issued documents on forest ownership reform in some regions

Sectors and Provinces	Issued documents on forest ownership reform
The SFA	“SFA Advice on Strengthening the Management of Transfers of Collective Forest Ownerships”
Jiangxi Province	“Management Rules of Property Trade in Jiangxi Province”, “Advice on Promoting Supporting reforms in Related Areas Holistic with for the Reform of Forestry Ownerships”.
Heilongjiang Province	“Management Rules of Pilot Trials on Transfer of Forests, Trees and Forest Lands in Heilongjiang Province”
Yunnan Province	“Management Rules of Transfer of Collective Forest Lands and Forests in Yunnan Province (Trial)”, “Management Rules of Small Mortgage Loans on Forest Ownerships to Farmer Households by Rural Credit Cooperatives in Yunnan Province (Trial)”, “Advice of Yunnan Provincial Government on Financial Services to Support Forestry Development and Reform of Collective Forest Ownerships”, “Management rules of Mortgage Loans of Forest Ownerships to Legal Persons by the Rural Credit Cooperatives in Yunnan Province (Trial)”
Sichuan Province	Meishan Municipality “Management rules of Transfer of Forest Ownerships in Meishan (Trial)”
Henan Province	“Advice of Henan Provincial Government on Further Promoting the Reform of Collective Forest Ownerships”, “Trial Proposal of Henan Province on Collective Forest Ownerships”
Guizhou Province	“Advice of CPC Guizhou Provincial People’s Government on Further Expediting the Development of Forest Ownership Reform”, “Management Regulations of Guizhou Province on the Transfer of Forest Lands and Trees”
Guizhou Province	Bijie Prefecture “Provisional Management Methods of Bijie Prefecture on Transfer of Forest Lands and Forests”
Guizhou Province	Qiandongnan Prefecture “Advice of Qiandongnan Prefecture People’s Government on Development of Market for the Elements of Forestry”, “Management Rules of Qiandongnan Prefecture on Registration of Forest Ownerships (Trial)”, “Rules of Qiandongnan Prefecture on Evaluation of Forest Resources (Trial)”, “Management rules of Qiandongnan

		Prefecture on transfer of forest lands and trees”, “Management rules of Qiandongnan Prefecture on Public Forests (Trial)” “Management rules of Qiandongnan Prefecture on Collection and Dissemination of Market Information on Elements of Forestry (Trial)” “A Notice on Expediting the Development of Market for Elements of Forestry”, “Provisional Rules of Qiandongnan Prefecture on Timber Trading”
Liaoning Province		“Rules on Transfer of Forest Resources”
Beijing		“Advice of the CPC Beijing Municipal People's Government on Promoting reform of collective forest ownership”
Fujian Province		“Advice of Fujian Provincial People’s Government on promoting reform of collective forest ownership”, “Management rules of Fujian Province on Registration of Forest Ownerships”
Xiangxi Province	Fu County	“Provincial Regulations of Fu County on Transfer of Forests, Trees and Forest lands”, “Provincial Regulations of Fu County on Assessment of Collective Forest Resources”, “Provincial Regulations on Mortgage Loans of Collective Forest Ownerships”

3. Basic Information

3.1 Descriptions of case study sites (Quantity, Types and Sources etc.)

3.1.1. Investigating Process

In accordance with the purpose and content of this research, the project team developed a detailed implementation plan for field survey. The Investigation process was divided into three phases:

The first phase was to prepare the field investigating outline and questionnaire. During November to December, 2009, literature studies were conducted on relevant information on reform of collective forest ownerships and transfers of forest ownerships, questionnaires, outlines and implementing plan were developed.

The second phase was to select sites for field investigation. By communications, exchange of ideas and discussions with relevant directors and staffs of the offices of Forest Ownership Reform in both Guizhou Provincial Forestry Bureau and Qiandongnan Prefecture in mid December 2009, and Jianghe, Jinping, Liping Huangping (Table 2) were finally selected as the sites for investigation on FTTC in Guizhou.

Table 2 Type of case study counties

Case study county	Type
Jianghe	One of the ten key forestry counties in Guizhou
Jinping	One of the ten key forestry counties in Guizhou, pilot county of reform of collective forest ownerships, pilot county of transfer of forest ownerships, pilot county of management of forest harvesting.
Huangping	Pilot county of management of forest harvesting, pilot county of transfer of forest lands and trees
Liping	One of the ten key forestry counties in Guizhou, the opening-up county at national level.

The third phase was to carry out field investigations. According to the implementing plan for field investigation, during the period of December 16-30, 2009, and the period of January 12-28, 2010, 14 research team members, namely: Zhi Ling, Qi Xinmin, Xie Yanming, Liu Yan, Yang Fang, Zhang Jing, Wang Shuhua, Luo Qinghua, Liu Yu, Liu Zifei, Sun Yalan, Fan Shaojun, Xu Dongmei, Tan Xiaojuan conducted a survey of related staffs of the case study counties. The survey was conducted on forest farmers, managers and staffs of forest enterprises, brokers, cooperative economic groups, staffs of collective forest farms, forest trading centers and their staffs, staffs of provincial forestry bureaus, prefectural forestry bureaus, county forestry bureaus, and forestry stations, and rural cadres.

The fourth phase was to sort out the information and input into computer. During January 4-12, 2010, and January 29 to February 20, a preliminary documentation and statistical analysis was carried out on the questionnaires, outlines and collected information of the Case Study Counties.

The fifth phase was to write up the research report.

3.1.2 Description of Basic Information of the Case Study Counties

1) Jianhe County

Jianhe County is located in the southeast of Guizhou Province and the center of Qiandongnan Prefecture. It belongs to subtropical monsoon climate zone. The annual average of temperature is 16.7 °C, the annual accumulated temperature is 4900 ~ 6500 °C, the frost-free period is 320 days, the annual average rainfall is 1177.2 mm, annual average sunshine hours is 1236.3h. The county administrates 7 townships, 5 towns and 301 rural villages (village committee), housing Han, Miao, Dong and Shui and many other nationalities. At the end of 2008, the total population of the county was 24.95 million, 59,891 households; the population density is 113 people / km². Gross National Product was RMB 924.73 million, of which: the output value of primary industry was RMB 351.17 million, secondary industry was RMB188.9

million, and the tertiary industry was RMB384.66 million. The total fiscal revenue was RMB76.09 million, and the total expenditure was RMB 462.08 million. The net income of farmers was RMB 2,377.7 per capita.

The total land area of Jianhe County is 216,027 hm², forested land area is 168,1251 hm², accounting for 77.83% of the total land area, its forestry resources are rich and it is one of the 10 key counties of forestry in Guizhou Province, with forest coverage of 68.2%. The area ratio of commercial forests and public welfare forests is 59.9:40.1. The total volume of standing trees in the county is 8.2238387 million m³, among which, commercial forest accounts for 61.6% and ecological and public welfare forest account for 38.4%.

Jianhe County in 2008 launched a comprehensive reform of collective forest ownerships; the collective forest area included in the reform of collective forest ownerships was 162,466.67 hm². Until December 10, 2009, the basic pre-certificate work of reform of collective forest ownerships in 12 towns and townships was completed; the area issued certificates accounted for 77.39% of total area of forest ownership reform. While doing well in clarifying ownerships and issuing certificates, Jianhe County made more efforts in carrying out reforms in the related areas, and the market of forestry elements was established and put into use in 2009.

2) Jinping County

Jinping County is located in the eastern margin of Guizhou Province and the east of Qiandongnan Miao and Dong Autonomous Prefecture, located in the transition zone from the eastern slopes of the Plateau of Yunnan-Guizhou to the Western hilly basin, within the fertile soil, warm climate, abundant rainfall and various species, known as "village of firs.". The average annual temperature is 16.4 degrees celcius, the annual precipitation in the territory is between 1250-1400 mm, and the annual sunshine is 1086.3h. According to statistics in 2008, the county has 8 townships, 7 towns, 205 administrative villages, 4 communities and one village committee, 1483 village groups, at the end of this year, the total population was 221,369, the population density was 135 people /km², of which the agricultural population was 19.6135 million, accounting for 88.6% of the total, it has 17 nationalities, including Miao and Dong Han and others, the population of minority accounts for 85%, belonging to the remote county of minority. The GDP of the county was RMB 1039.41 million, the primary industry was RMB 219.01 million, the secondary industry was RMB 405.15 million, and the tertiary industry was RMB 415.25 million. The total fiscal revenue was RMB 98 million, and the total expenditure was RMB 515.48 million. The net income of famers was RMB 2268 per capita.

According to the report on secondary inventory of forest resources: the total area of the county is 159,690 hm², of which cultivated lands is 85,330 hm², with a per

capita arable land of 0.041hm²; forestry land area is 126,407 hm², accounting for 79.16 % of the total land area of the country, forest land per capita is 0.606 hm², there are 376 village forest farms managing an area of 49,880 hm², accounting for 39.71% of collective forest land area, the forest coverage is 72.01%, the volume of standing trees is 7.69 million m³. In the forestry land, the area of ecological and public welfare forest is 36,950 hm², accounting for 29.23 %; the area of commercial forests is 89,450 hm², accounting for 70.77 %, it is a typical county in collective forest region in south China.

In 2007 Jinping County conducted the first pilot reform of collective forest ownerships. By the end of 2009, the area with confirmed ownerships reached 115,730 hm², 98.9% of households were allocated forest land, of which 99.3% of the household have registered their ownerships. In October, 2007, Jinping County took the lead to carry out experimental work on transfer of forest ownerships, Qiandongnan Prefecture set up a management center for the market of forestry elements based on experiences in Jinping County.

3) Huangping County

Huangping County is located in the northwest of Qiandongnan Miao and Dong Autonomous Prefecture, 197 km² away from provincial capital of Guiyang, 54 km² away from the capital of prefecture - Carey, bordering Shibing in the east, Wengan and Fuquan of Qiandongnan Prefecture in the west, Carey and Jinagtai in the south, Yuqing of Zunyi Municipality in the north, connecting the three prefectures and bordering six counties Municipalities. The climate of Huangping County belongs to subtropical humid monsoon. Four seasons are distinct, the climate is mild, and rainfall is abundant. The annual average temperature is 14.9 °C, the frost-free period is 267-282 days, the average rate of the sunshine is 25%, and the annual average rainfall is 89.38 mm. At the end of 2008, the total population was 321,100, inhabited by 23 nationalities, including the Miao, Han and other groups, the population of minority accounts for 68.13% of the total population throughout the county, among which the population of Miao is 59.1%. In accordance with statistics in 2008, the county's GDP was RMB1.1363 billion, of which: the total output value of primary industry was RMB488.77 million; the secondary industry was RMB165.11 million; the tertiary industry was RMB 482.42 million. GNP per capita was RMB 3,526. The total output of Agriculture, Forestry, Stockbreeding and fishery in 2008 was RMB 753.5 million, of which the output of agriculture was RMB 463 million, forestry output value of RMB 68.85 million. The total fiscal revenue was 84.24 RMB million, and the total expenditure was RMB 572.911 million. The net income of farmers was RMB 2,344.01 per capita.

The area of state-owned lands in Huangping County is 166,780 hm², of which

forest land is 100,230 hm², accounting for 56.48% of the total. According to the ownerships of forest lands, the state-owned forest lands is 6,227 hm², collective forest lands is 87,970 hm². Public welfare forest lands is 33,720 hm², accounting for 33.64% of the total forest lands; the collective forestry lands of farmers is 0.262 hm² per capita. Huangping is an agricultural county, the collective forest lands account for 87.77%, having the potential significant contribution to rural living standards. The total forest area in the whole county is 69,867 hm²; the volume of standing trees is 4,135,400 m³, forest coverage is 41.87%. By the end of mid-December 2009, the area of demarcation and ownerships confirmed in the reform of forest ownerships of Huangping County has reached 83,040 hm², and 113,673 parcels of forest land have been demarcated, 100% of which were clarified with ownerships. 107,797 parcels of land were issued with ownership certificates, the area issued with certificates reached 79,967 hm², accounting for 96.3%.

There are 14 towns and townships, 243 administrative villages, 2,100 groups, 81,500 households in the county. And the forest reform involves 14 towns & townships, 242 administrative villages, 61200 households, 285,200 persons; the population density is 171 persons / km². When Huangping County confirms the ownership and issues certificates of the forest reform, it enhances the supporting reforms in the related areas, in October 2009; the county established a market of forestry elements.

4) Liping County

Liping County is at the junction of Hunan, Guizhou and Guangxi Provinces, respectively bordering Jing County of Hunan, Tongdao Dong Autonomous County, Sanjiang Dong Autonomous County and Congjiang County of Guangxi in the east and south, Rongjiang County in the west, Jianhe County and Jinping County in the north, it is an 'opening-up' county at national level. The area of state-owned lands is 443,930 hm², the population density is 115 people / km², it administrates 10 towns, 15 townships, 3,088 groups of villagers, 115 800 households, with a total population of 517,000, of which the number of rural population is 45,9700. There are Han, Dong, Miao, Yao, Zhuang and many other nationalities in the county, of which Dong accounting for 70%. The average annual rainfall is 1321.9 mm; the annual average temperature is 15.6 °C. By the end of 2008, the GDP was RMB 1.70209 billion, of which the primary industry was RMB 581.98 million, the secondary industry was RMB 458.16 million, and the tertiary industry was RMB 661.95 million. The total fiscal revenue was RMB 116.7 million; the total expenditure was RMB 808.19 million. The net income of farmers was RMB 2,347 per capita.

Liping County is one of the 10 key counties of forestry in Guizhou Province, the area of forest lands is 345,392 hm², ecological and public welfare forest is 109 100

hm², accounting for 31.6%, commercial forests is 236,200 hm², accounting for 68.4%, forest lands is 310,800 hm², the forest coverage rate is 72.17%, the volume of standing trees is 19,304,000 m³. The area of collective forest lands included in ownership reform with ownership clarification and certification is 338,670 hm², accounting for 98.1% of the total forestry land, by the end of 2009, the rate of areas with clarified ownerships is 98.2%.

On November 28, 2007, to explore the experiences learned from the reform of collective forest ownerships, the pilot reform of forest ownerships in Liping County was officially launched in Yandong Town. Yandong Town has always adhered to the principles of "forest-based, people-oriented, promoting forest reform by the interaction of forest farmers", in order to clarify forest ownerships and develop forestry as the core, to carry out pilot work of forest ownership reform to satisfy people as the mandate, based on the pilot trials of forest ownership reform in Yandong Town, the reform of forest ownerships was officially launched in the county on April 18, 2008. At the end of 2008, the field work on demarcation for forest ownership reform in the whole county was completed. In 2009, mainly based on the work of 2008, further work was conducted on indoor documentation and data handling. When the reform of forest ownerships was basically finished in 2009, according to the need for carrying out supporting reforms in the related areas, a market of forestry elements was established in Liping County.

3.2 Survey information of FTTC (Staffs, and other respondents)

Investigation involves 218 forest farmers, 29 Villages, 20 forestry stations, 27 forestry centers, 20 forest workers, 21 enterprises, 22 employees, 10 staffs in trading centers and 11 brokers.

4. Models, operational procedures and/or transparency of forest ownership trading in Pilot Counties.

4.1 Existing models of forest ownership trading in Pilot Counties

There are two models of trading of forest ownerships, i.e. transaction on the exchange and transaction outside the exchange, in Qiandongnan Prefecture of Guizhou. In the transactions outside the exchange, the transfer of forest ownerships was done in the way of transfer, lease, contract, and share. The transactions on the exchange are mainly transfer and mortgage. The ways to transfer forest ownership are mainly auction and negotiation in transaction on or outside the exchange (Table 3). Transferees are mainly forest farmers, brokers, forestry centers and wood processing enterprises. Forest lands in Qiandongnan Prefecture are yet to enter the transfer of

forest ownerships in trading centers.

Table. 3 Models and ways of Forest Ownership Trading in Case Study Counties

Case Study County	Transaction on the Exchange		Transaction outside the Exchange	
	Trade forms	Trade ways	Trade forms	Trade ways
Jianghe	Transfer	Auction and Negotiation	Transfer, Share and Contract	Negotiation
Jinping	Transfer and Mortgage	Auction, Negotiation	Transfer, Share (Invest), Contract (Lease)	Negotiation and Auction
Huangping	Transfer	Auction	Transfer, Share, Contract	Negotiation and Auction
Liping	Transfer	Auction and Negotiating Tender (Negotiation)	Transfer, Share, Contract (Lease)	Negotiation and Auction

Among the people surveyed in the case study counties, there are 81 farmers who have transferred the forest ownerships, accounting for 37.16% of the total number of persons surveyed. Among the 81 famers 77.78% have transferred trees, and 22.22% have transferred forest land (Table 4).

Table.4 Forestry farmers of forest tenure trade

County	Trade participants		Forest trade participants	Forest land trade participants
Jianhe	5	Number	5	0
		Proportion	100.00%	0.00%
Jingping	23	Number	13	10
		Proportion	56.52%	43.48%
Huangping	30	Number	28	2
		Proportion	93.33%	6.67%
Liping	23	Number	17	6
		Proportion	73.91%	26.09%
Total	81	Number	63	18
		Proportion	77.78%	22.22%

Among forest farmers who have transferred forest ownerships, all the transfers of forest lands were done by transfer outside the exchange. Forest can be transferred

outside the exchange and on the exchange. There are 34 people transferred on the exchange, accounting for 53.97% of the total, all of which were done in the form of transfer (Table 5). The transfers on the exchange are mainly done in the way of auction (Table 6).

Table.5 Forest trade forms in FTTC

County	Forest trade participants in FTTC		Forms				
			Assignment	Lease	Mortgage	Contribution of capital	Others
Jianhe	0	Number	0	0	0	0	0
		Proportion	0.00%	0.00%	0.00%	0.00%	0.00%
Jingping	4	Number	4	0	0	0	0
		Proportion	100.00%	0.00%	0.00%	0.00%	0.00%
Huangping	17	Number	17	0	0	0	0
		Proportion	100.00%	0.00%	0.00%	0.00%	0.00%
Liping	13	Number	13	0	0	0	0
		Proportion	100.00%	0.00%	0.00%	0.00%	0.00%
Total	34	Number	34	0	0	0	0
		Proportion	100.00%	0.00%	0.00%	0.00%	0.00%

Table6 Ways of forest trade in FTTC

County	Forest trade participants in FTTC		Ways			
			Call for bids	Auction	Negotiation	others
Jianhe	0	Number	0	0	0	0
		Proportion	0.00%	0.00%	0.00%	0.00%
Jingping	4	Number	0	1	2	1
		Proportion	0.00%	25.00%	50.00%	25.00%
Huangping	17	Number	0	11	6	0
		Proportion	0.00%	64.71%	35.29%	0.00%
Liping	13	Number	0	10	2	1
		Proportion	0.00%	76.92%	15.38%	7.69%
Total	34	Number	0	22	10	2
		Proportion	0.00%	64.71%	29.41%	5.88%

Table 7 shows that among forest farmers who transferred trees 29 forest farmers

made the transfer outside the exchange, representing 46.03% of the total, only one farmer adopted the form of investment, the rest were all the form of transfer (Table 7). Most transfers outside the exchange were done in the form of agreement, accounting for 86.21% (Table 8).

Table.7 forest trade forms outside the exchange

County	Forest trade participants outside of FTTC		forms				
			transfer	Lease	Mortgage	Share	Others
Jianhe	5	Number	5	0	0	0	0
		Proportion	100.00%	0.00%	0.00%	0.00%	0.00%
Jingping	9	Number	9	0	0	0	0
		Proportion	100.00%	0.00%	0.00%	0.00%	0.00%
Huangping	11	Number	10	0	0	1	0
		Proportion	90.91%	0.00%	0.00%	9.09%	0.00%
Liping	4	Number	4	0	0	0	0
		Proportion	100.00%	0.00%	0.00%	0.00%	0.00%
Total	29	Number	28	0	0	1	0
		Proportion	96.55%	0.00%	0.00%	3.45%	0.00%

Table.8 Ways of forest trade outside the exchange

County	Forest trade participants outside of FTTC		Ways			
			Call for bids	Auction	negotiation	others
Jianhe	5	Number	0	0	5	0
		Proportion	0.00%	0.00%	100.00%	0.00%
Jingping	9	Number	0	0	8	1
		Proportion	0.00%	0.00%	88.89%	11.11%
Huangping	11	Number	0	0	8	3
		Proportion	0.00%	0.00%	72.73%	27.27%
Liping	4	Number	0	0	4	0
		Proportion	0.00%	0.00%	100.00%	0.00%
Total	29	Number	0	0	25	4
		Proportion	0.00%	0.00%	86.21%	13.79%

Others: for example, on request by village official

Table 9 Examples of forest ownership transactions in the case study counties.

Places of Transaction	Forms of Transaction Ways of Transaction	Cases
Transactions outside Exchange	Transfer Negotiation	<p>Case No. 1 (Transaction of mountain forest): Certain broker bought two mountain forests with an area of about 1.597 hm² located in Liping Villages, Xinzhou Town, and Huangping County in 2005.</p> <p>Case No. 2 (Transaction of mountain forest): Regarding mature forest, Jinping Hongfa Timber Co., Ltd. made an agreement as follows: The bought mature forest should be cut off in 5 years, and forest management right should return to forest farmers or collectivity, if it can't be cut off in 5 years, it can be extended to 2 more years, but forest farmers or collectivity should get subsidy of 300-450 RMB/hm² or 300-900 RMB/hm², if it still can't be cut off in the extended 2 years, the forest and forest land should be returned to the forest farmers or collectivity.</p>
	Buying shares Negotiation	<p>Case No. 1: 70% of economic benefit of harvesting timber in Nanmuyou forest center of Liuchuan town in Jianghe county, will be occupied by the management institute of Nanmuyou forest center, and 30% will be under the owner of the forest land. After harvesting, the land should be returned to Caiyuan Village of Liuchuan Town.</p> <p>Case No. 2: In Jinping Chunlei Forest Farm, two counties and six townships were involved. During the reform of forest ownerships, shares were set up according to the area of forest land established at the three different times since the foundation of the farm and the profits from timber, shares calculated and defined, were put into respective shareholders' accounts.</p> <p>Case No. 3: Group No. 1 to 8 of Xiazai Village, Maoping Town, Jinping County became share holders of Jinping Timber Company, who will reforest and manage the barren mountains for a period of 30 years, species for timber production will be planted, and only profit from rotational harvests will be shared (profit from thinning will not be shared). According to site conditions and localities of forest lands, the shared proportions of profits between farmers and company will be 1:9; 2:8 and 3:7.</p>
	Contract Negotiation	<p>Case No. 1: A teacher of the vocational middle school in Zhongdu Village, Liuchuan Town, Jianghe County contracted a forest land to grow orange and loquat, after 20 years, he will transfer the forest land to local farmers for management.</p>

		<p>Case No. 2: 10 years ago, the Forestry Administration in Jiangping County contracted a forest land of Wude Village to grow pears, the contract duration was 15 years, with an area of 5.5 hm², then the pear trees were sub-contracted to individual farmers who will pay a contract fee to the County Forestry Administration of more than 1,000 RMB per year, when the duration expires, then the pear trees and forest land belong to the farmers.</p> <p>Case No. 3: 20 years ago, a forest technician in Jiangping County contracted 1 hm² of forest land to grow oranges and pears.</p> <p>Case No. 4: A Jiangsu businessman invested a pepper base in Jinping in 1999 (Now it involves over 300 farmers and the land area is more than 53.33 hm²), the farmers signed a 15-year leasing contract with the base.</p> <p>Case No. 5: In 2003, 7 businessmen of Yancheng, Zhejiang Province, invested RMB 3 million for leasing 100 hm² of barren mountains to establish a base of growing Chinese traditional medicinal plants, about 0.1 billion peppers trees were planted.</p> <p>Case No. 6: Wangbing, a businessman of Linan, Zhejiang Province, invested RMB 100,000 to establish a hickory base of about 20 hm² in Wenjiang Village, Datong Township, and Jinping County in 2004.</p> <p>Case No. 7: Long Pingen and Long Guoqiu together invested and contracted around 200 hm² of forest land, and Long Limin invested RMB 240,000 to build 40 hm² of camellia forest in Yunliang Village, Dunzai Town, and Jinping County.</p> <p>Case No. 8: Ouyang Kejiu in Ouyang Village, Xinhua Township, Jinping County invested in a forest land of 333,300 hm².</p> <p>Case No. 9: Long Yulan in Zaixian Village, Ouli Township, Jinping County invested RMB 105,000 to establish Mujinagzi forest.</p>
	<p>Transfer Auction</p>	<p>Case No. 1: Gexi Forest Farm of Jinping County published the timber information on the internet, pasted flyers in the county, and organized the auction in the forest farm.</p> <p>Case No. 2: Due to the lack of funds for the project of drinking water for human and livestock in Longjinwantishui of Taiwong Village, Xinzhou Town, Huangping County, village committee agreed to proceed with public bidding of collective ownership of forest in Caojiafeng.</p>
<p>Transactions on Exchange</p>	<p>Transfer Auction</p>	<p>Case No. 1: Timber transaction on exchange in Malong forest center between Forestry Administration, Forestry Business Company and Rongchang Timber Co., Ltd. was a typical case.</p> <p>Case No. 2: When the Jiahe Timber in Liping County needs the timber, they buy it in the trading center of forest ownerships when it is in large amount.</p> <p>Case No. 3: In 2009, a broker in Huangping auctioned timbers in element market, the price of transaction is RMB 620, a state-owned timber processing factory won the bid.</p>

Transfer Negotiation	Case No. 2: The records of transactions in the trading center of forest ownerships in Jinping County in 2009 showed that there were 50 negotiations out of 197 auctions.
Mortgage Loans Negotiation	Case No. 1: The trading center in Jinping has conducted a RMB 300,000 mortgage loan on forest ownership certificate.

4.2 Operational procedures for trading of forest ownerships in the pilot county

4.2.1 Operational Procedures of transactions outside exchange

1) Land shares

There is a transfer model that farmers make an investment in a forest farm with their land as shares in the case study counties. Forest farms will manage the forest lands, and hire the farmers for tree planting and tending with wages (part of the wages is the subsidy from the government for rangers), or after harvesting the forests, allocate a certain proportion of management shares (e.g., the collective forest farm of Taiweng village of Huangping County allocates management shares of 20%). Until harvest of the forests, the forest farm and the forest farmers will share the net profit (The sales income deducted by harvesting cost) (Fig.1).

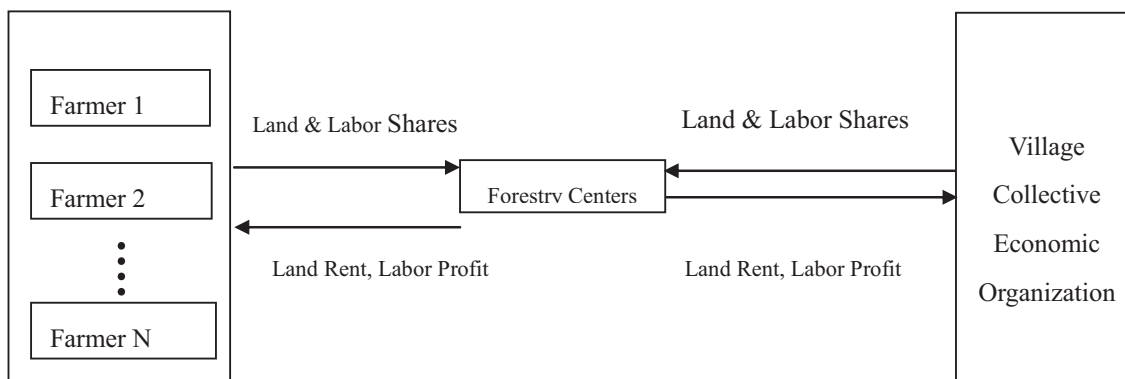


Fig.1 Land Shares

2) Transfer of green mountains, timber or timber products

Direct market oriented

When selling the mountain, timber and timber products, forest farmers and forest farms negotiate the final prices of mountain, timber and timber products by brokers or timber processing enterprises. (Fig.2)

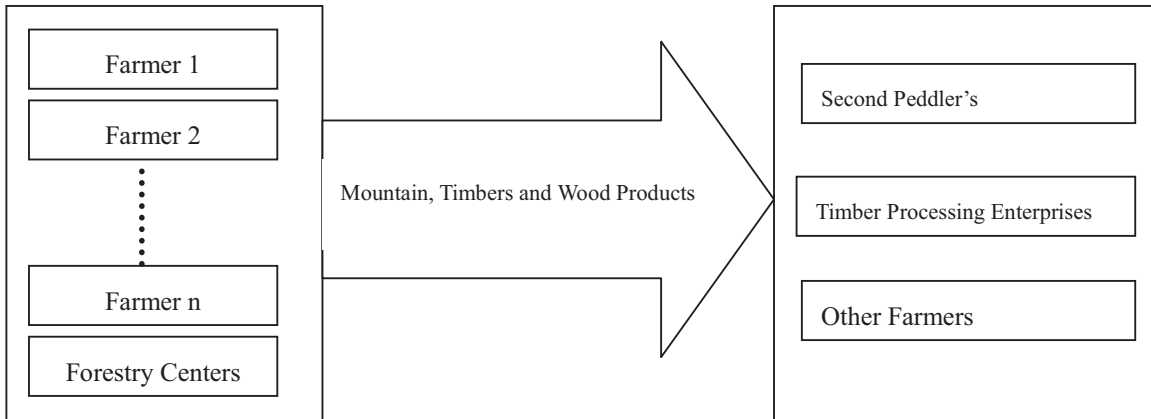


Fig.2 Trade of green mountain, timber and wood products

Through cooperative economic organization

During the course of trading, those done through cooperative economic organizations are fruits of economic fruit trees. The cooperative economic organization provides farmers with services before, during and after production and unified materials for production, technical guidance during production, and organized sales after production (Fig.3). In this course, according to the number of transactions between forest farmers and the cooperative, the cooperative returns profit to forest farmers again, to strengthen the links of forest farmers and the cooperative, to further increase the income of forest farmers, to secure the quality of products, to achieve a win-win for the forest farmers and the cooperative. When selling wood products through the cooperative economic organizations, forest farmers do not need to face the market individually, being placed at a level equal to the buyer in the market, thus they can get more sales income.

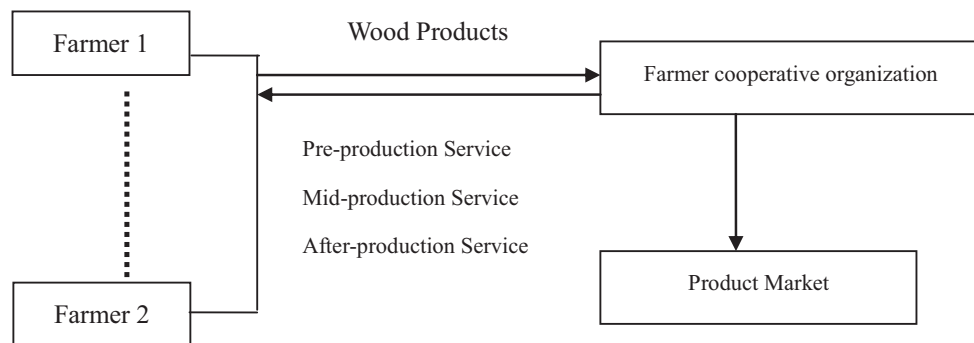


Fig.3 Selling Wood Products through the Cooperatives

3) Contracting forest lands

There is model of contracting forest lands in the case study counties. Forest farms use the contracted lands to plant trees, and hire some forest farmers for tree planting and tending with a wage (Part of the wages is the subsidy from the government paid for rangers) and a leasing fee. Forest farmers can get more stable benefit with low risk although the benefit is small (Fig.4).

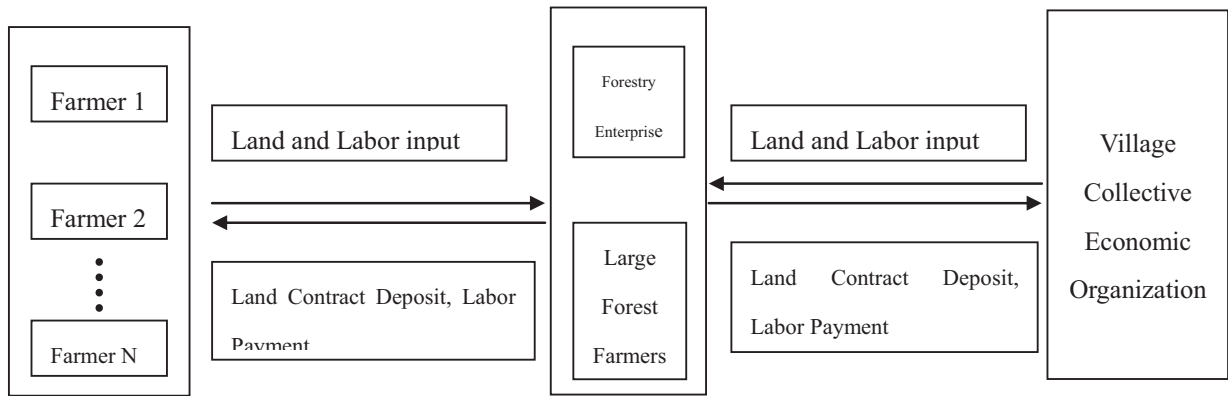


Fig.4 Contracting Forest Lands

4) Auction

In the transactions outside the exchange, transferors of forest ownerships also choose to auction by themselves (Fig. 5), e.g. Gexi Forest Farm in Jinping County and the Collective Forest Farm of Taiweng Village, Huangping County have conducted the transfers of forest ownerships by auction.

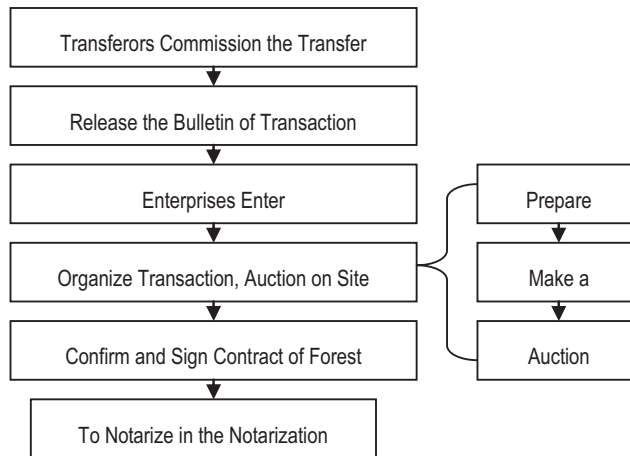


Fig. 5 Auction Procedures outside the Exchange

4.2.2 Transactions on the exchange

There are 2 models of timber trading, auction and negotiation, in the FTTC, both of which can be used. At each transaction, auction was done first, when the base price of bidding is too high and no one bids for it, the bid will be terminated and the timber will be sold through negotiations after the auction is completed. Both trading models should be conducted in the FTTC, and any transaction outside the exchange is prohibited.

1) Auction

During the transfer of forests and forest lands, when the use right of forest lands or ownership of forests belongs to an individual, the transfer of forest lands should have a written comment from the village committee; When the use right of forest lands or ownership of forests belongs to collectivity, a village meeting should be held to make democratic decision by voting; When the ownership of forests belongs to the state-owned organization, the transfer has to be democratically decided by a representative meeting of the labor union, examined and approved by authorities at each level of government, then it can be put for trade in FTTC.

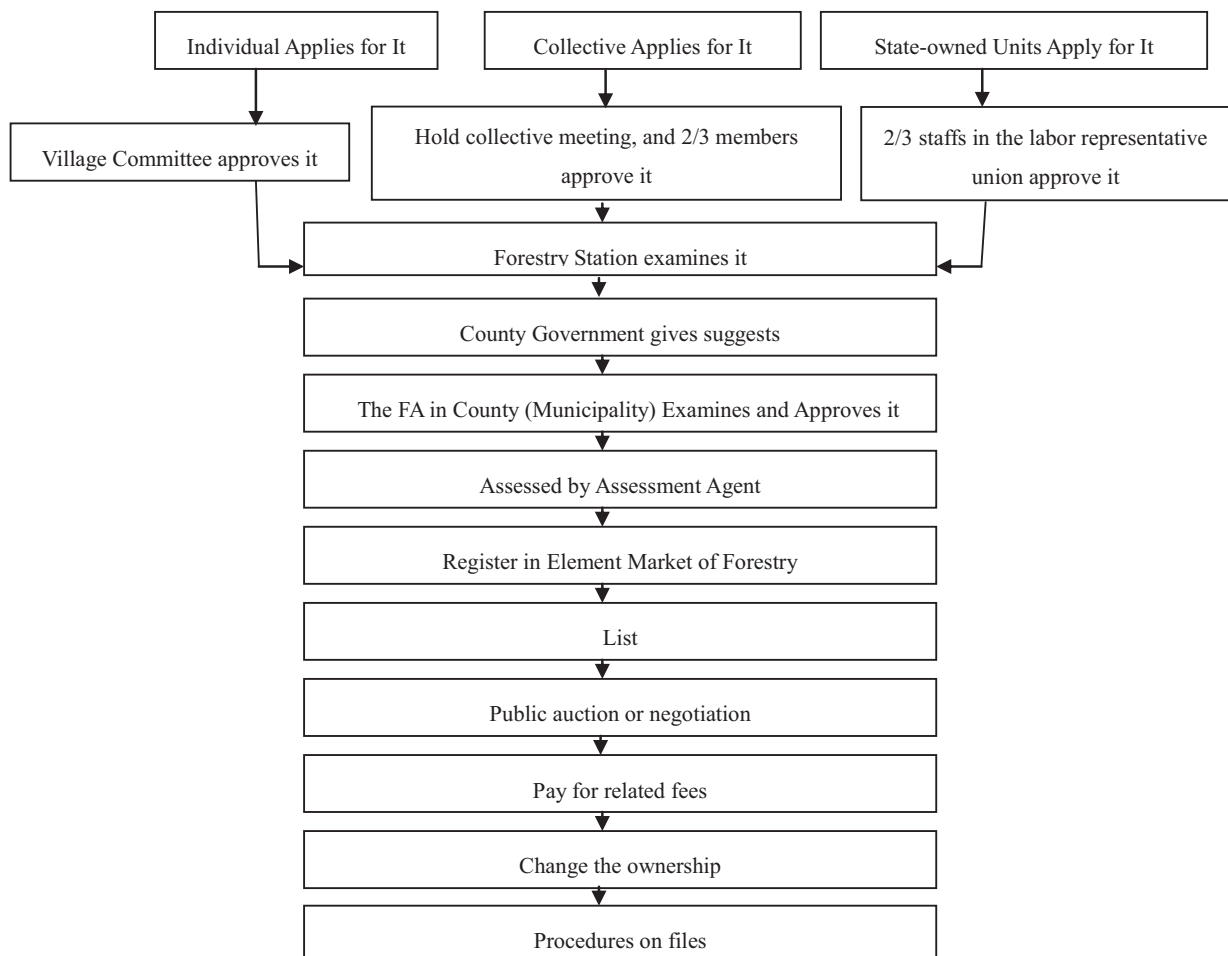


Fig. 6 Auction Procedures on Exchange

2) Negotiation

Figure 7 shows the procedures for transfer of forest ownerships through negotiation in the FTTC.

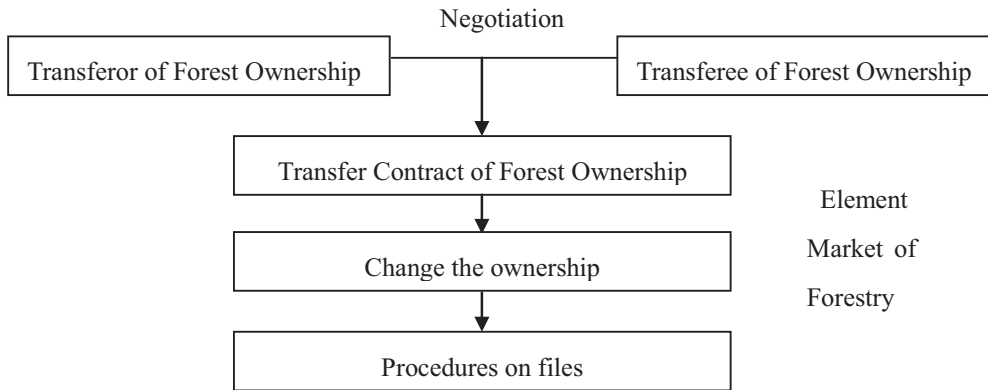


Figure 7 Negotiation Procedures for transaction on Exchange

4.3 The importance of trading centers in the transaction of forest ownerships

4.3.1 The requirements to actualize the disposal right for striving forestry and enriching forest farmers

Liberalization of management right, actualization the right of disposal and securing the right of benefits are basic requirements in the reform of collective forest ownerships. The transfer and cashing of forest resources assets are important parts of implementing the right of disposal, which can help the farmers to obtain funds to conduct forestry production and management activities and increase forest resources. The establishment of forest ownership trading centers can promote the rational transfer of forests, trees and use right of forest lands, revitalize the forest resources and assets, promote the flow and effective combination of all elements of forestry production, and create necessary conditions for large-scale forestry operations. The efficiency of forestry investment can be improved through diverse approaches such as leasing and tendering, and vigorous development of non-public forestry will promote engagement of the whole society in forestry, and will make immeasurable contribution to speeding up forestry development.

4.3.2 Development of a symmetric information platform for the transfer of forest ownerships

In the transaction of forest ownerships, the forest farmers have limited information, forest farmers with limited forest lands are very scattered in the market. The establishment of forest ownership trading centers can reduce the costs of information search and negotiations of both buyers and sellers, overcome adverse selection or moral risk due to asymmetry of or incomplete information in the transaction of forest ownerships, and avoid voluntary sale or transfer of forest ownerships to enterprises under the pressure of the village committee in some cases, or avoid losses of forest farmers due to poor transparency of market prices and missing information on profit.

4.3.3 Setting correct prices of forests and forest lands and promoting increase of the values of forests and forest lands.

Assessment of forest assets in FTTC is a fundamental safeguard for forest farmers who get the shares of forest lands, to prevent the forest farmers from permanently selling their assets at a lower price, resulting in the loss of mountains and lands. After the establishment of trading centers, transfer of forest ownerships is smoother, through widely publicized information on transactions, and standardized management of the bidding process, private negotiation of buyers and sellers of forest ownerships can be prevented, therefore avoiding irrational lower values of forest ownerships.

4.3.4 Establishment of a credit platform for forestry loans

Providing improved services of mortgage registration for mortgage loans on forest ownership certificates can solve the problem of inadequate funding of forest farmers for forestry development, to some extent, it reduces the risk of financial institutions in providing such kind of loans, laying down a foundation for bank funds to enter the field of forestry production.

4.3.5 Achievement of sunshine allocation of harvest quota

Trading Centers provide a competitive platform for enterprises to get raw materials; enterprises can buy raw materials in the trading centers at a competitive price, creating a condition for sunshine operation in allocating harvest quotas. The harvest quotas will be allocated to townships (towns), villages (groups) or individuals, guaranteeing forest farmers' legal equal rights to harvest trees, and actualizing the disposal right of forests managed by farmers after the reform of forest ownerships.

4.3.6 Promotion of functional changes of forestry authorities

Since establishment of the trading centers, the forestry bureau must transform its functions in a timely manner, mainly focused on three major functions, law enforcement, service and management. The institution should be downsized by functional transformation, some staffs were moved to the element markets to engage in service management, and realize the transition from management to both management and service.

4.4 Advantages, disadvantages and transparency of different models of trading of forest ownerships

4.4.1. Transactions outside exchange

(1) The advantages of transactions outside exchange

Table 10 shows among the investigated forest farmers, there were 91 forest farmers who had the willingness to make the transactions outside exchange, accounting for 41.7% of the total. The reasons why forest farmers were willing to transfer the forest ownerships outside exchange are as follows:

1) Convenience

51.7% of farmers think that transactions outside exchange convenient, fast, and transfer procedures are simple, no need for audit, registration, and auction in the market of forestry elements, saving a lot of time, for those forest farmers urgently in need of money, it can solve their urgent needs.

2) Low cost of transaction

22% of forest farmers think that transactions outside the exchange save more on transaction costs. If the middlemen, timber processing enterprises purchase at the 'door', farmers can earn money at home, and save a lot on transport costs and time.

3) No limit on the scale of transactions

11.0% of forest farmers think that the scale of transactions outside the exchange has no limit, and even if the volume of transaction is very small, they can still easily have access to markets and make profits, this is more suitable for forest farmers conducting small-scale transactions.

Table.10 Reasons to not choose FTTC for farmers

County	Farmers with willingness trade outside of FTTC	Follow other farmers	Do not know FTTC	Do not know how to access FTTC	Lower cost			Easy to trade outside of FTTC	No limit on trade scale	Time saving	Fair negotiation
					Lower transaction outside of FTTC	Lower trade prices in FTTC	Appraisal not credible				
Jianhe	14	Number 3 21.4%	5 35.7%	3 21.4%	4 28.6%	0 0.0%	7 50.0%	1 7.1%	0 0.0%	0 0.0%	
Jingpin g	26	Number 5 19.2%	7 26.9%	2 7.7%	8 30.8%	0 0.0%	15 57.7%	6 23.1%	0 0.0%	0 0.0%	
Huangp ing	21	Number 12 57.1%	9 42.9%	6 28.6%	3 14.3%	0 0.0%	8 38.1%	1 4.8%	0 0.0%	0 0.0%	
Liping	30	Number 4 13.3%	15 50.0%	4 13.3%	5 16.8%	1 3.3%	17 56.7%	2 6.7%	2 6.7%	1 3.3%	
Total	91	Number 24 26.4%	36 39.6%	15 16.5%	20 22.0%	1 1.1%	47 51.7%	10 11.0%	2 2.2%	1 1.1%	

Note: multi-choice questions

(2) Disadvantages of transactions outside the exchange

1) Disorder of Transfer

According to the "Forest Law", transfers of forests, forest lands, trees must be approved by the forestry authority and evaluated by a forest resource asset assessment institution, before the transfers, after the transfer is done, the change of ownership must be registered according to law. At present, although a transfer contract was signed by both parties of the transfer, most transfers have not gone through the statutory procedures and not legally registered, therefore these changes of ownerships cannot be protected according to law.

2) Non standard management of transfers

Among the transactions outside exchange, oral agreements accounted for 6.59%, only 3.3% were through a fair and impartial authority (Table 11). Even if a written contract was signed, the contract terms were not standardized, and the content was too simple, the contract duration was too short, unfavorable to management, leading to over exploitation and illegal deforestation. In addition, the terms on rights, obligations and breaching liability of both sides were not clearly defined. Even if the buyer was in breached of the contract terms, the only thing forest farmers can do was to find new buyers, forest farmers were in a disadvantageous position and it was hard to solve the problem through a judicial process.

Table.11 Trade media out of FTTC for farmers

County	Traders outside of FTTC		Oral agreements	Contract	By middleman	By	
						public notary office	No idea
Jianhe	14	Number	0	10	1	0	0
		Proportion	0.00%	71.43%	7.14%	0.00%	0.00%
Jingping	26	Number	1	19	5	0	0
		Proportion	3.85%	73.08%	19.23%	0.00%	0.00%
Huangping	21	Number	3	21	1	2	0
		Proportion	14.29%	100.00%	4.76%	9.52%	0.00%
Liping	30	Number	2	24	5	1	1
		Proportion	6.67%	80.00%	16.67%	3.33%	3.33%
Total	91	Number	6	74	12	3	1
		Proportion	6.59%	81.32%	13.19%	3.30%	1.10%

Note: Multi-choices questions

3) Asymmetrical Information

In the process of transaction, forest farmers face more problems, e.g. they do not know the market prices of transactions, information of buyers, and policies of forest ownership transfers (Table 12), all these are due to lack of information. Under such situation of asymmetric information, forest farmers are at a disadvantage.

Table.12 Problems facing forest farmers in trading forest tenure

County	Forest tenure participants	No information Of buyers	No Markets prices	Unfair trade	Do not Know trade policies	Do not Know where to go for trading	Not economic	Do not know trade procedure	Can not get logging permit	No any question	Cannot Choose forms of trade freely	Others
Jianhe	5 Number Proportion	3 60.00%	2 40.00%	0 0.00%	0 0.00%	0 0.00%	1 20.00%	1 20.00%	0 0.00%	0 0.00%	0 0.00%	1 20.00%
Jingping	23 Number Proportion	5 21.74%	5 21.74%	2 8.70%	3 13.04%	2 8.70%	5 21.74%	5 21.74%	3 13.04%	8 34.78%	0 0.00%	2 8.70%
Huangping	30 Number Proportion	10 33.33%	24 80.00%	3 10.00%	7 23.33%	6 20.00%	11 36.67%	1 3.33%	1 3.33%	8 26.67%	1 3.33%	1 3.33%
Liping	23 Number Proportion	6 26.09%	10 43.48%	0 0.00%	6 26.09%	5 21.74%	2 8.70%	0 0.00%	0 0.00%	6 26.09%	0 0.00%	1 4.35%
Total	81 Number Proportion	24 29.63%	41 50.62%	5 6.17%	16 19.75%	13 16.05%	19 23.46%	7 8.64%	4 4.94%	22 27.16%	1 1.23%	5 6.17%

Note: multi-choices question. "others"include payment delay(Jianhe 1); have no right to manage(Jingping 1); high tax rate (Huangping 1), not trade as auction price (Liping 1), no idea ((Liping

1)

4) Lacking professional staffs for assets evaluation

For transactions outside exchange, prices of forest ownerships are negotiated and agreed by both parties without an independent third party to assess the prices of trees, forest lands, or forest products. Farmers lack the ability to assess the green mountains, often leading to deals at a lower price.

5) Potential troubles existing in the transfer of standing trees

In recent years, with the rising timber prices, transfers of standing trees have sharply increased, but what were transferred are often the green mountains with a short transfer duration, driven by interests, some people tend to take risks by over harvesting to cover their investment and get profit, imposing a great pressure on forest resources management. Moreover, this model of transfer focuses on short-term interest, regeneration is not carried out or with poor quality at the harvested sites, and reforestation was often unsuccessful, which is not conducive to the sustainable development of forestry.

6) Transfers were scattered and small in scale

Transfer of forest ownerships is lacks of plan, forest lands of large scale forest farmers are scattered, not connected with each other and therefore increases management cost. There are not many forest farmers who have a forest area over 100 hm², benefit is not obvious and there is no forestry enterprise that has an annual production value over RMB 100 million. Very little commercial and industrial capital entered the field; the investment and financing of the forestry sector is difficult.

4.4.2. Transactions on exchange

Table 13 shows that among the surveyed forest farmers, 51 forest farmers had a potential willingness to conduct transactions on the exchange, accounting for 23.4% of the total.

(1) Advantages of transactions on the exchange

1) Clear Ownership

For all transactions dealt in the trading centers the sellers have to present related certificates of ownership. After transaction is done, the change of ownership must be registered through certain procedures have to be handled, clarifying the rights of both parties which can be better protected according to the "property law" and reduce the probability of future disputes. Even if disputes arise, it can be resolved more quickly.

2) Standard transactions secure the interests of forest farmers

After the auctions are done in the FTTC, the logging permits, transporting permits and other permits can be handled immediately, which is more convenient and

transparent than private transactions. For timber transactions in the trading centers, a membership deposit was adopted, once a contract is breached, , if both parties can reach an agreement, the forest ownership trading centers can be requested for mediation, if the mediation fails, , then it will be delivered to the judiciary for solution. Once the liability of breaching of the contract is identified, the trading center, according to the liability and the extent of damage, can be directly transferred in part or whole the deposit of the breaching party to the other party of the transaction as compensation.

3) Increase of timber price

For commercial timber traded in the FTTC, the number of bidders should be no less than 3, during the one-time bidding, the bidder would raise the price in order to win the bid, therefore to some extent, resulting in an effective increase of profit for forest farmers. 49.02% of surveyed forest farmers think that the transactions in the centers can raise the transaction prices and increase the profits of farmers (Table 13).

Table.13 Reasons to choose FTTC for forestry farmers

County	Number of farmers will choose FTTC		Follow other villagers	raise the transaction prices in FTTC	Easy to access and time saving	Credible appraisal	Safe, reliable	Have no choices for logging permit	Full information	Reduce trade disputes
Jianhe	9	Number	0	8	0	1	0	0	0	0
		Proportion	0.00%	88.89%	0.00%	11.11%	0.00%	0.00%	0.00%	0.00%
Jingping	7	Number	0	1	1	3	3	0	0	0
		Proportion	0.00%	14.29%	14.29%	42.86%	42.86%	0.00%	0.00%	0.00%
Huangping	16	Number	0	7	0	3	10	2	0	1
		Proportion	0.00%	43.75%	0.00%	18.75%	62.50%	12.50%	0.00%	6.25%
Liping	19	Number	0	9	0	4	12	1	2	0
		Proportion	0.00%	47.37%	0.00%	21.05%	63.16%	5.26%	10.53%	0.00%
Total	51	Number	0	25	1	11	25	3	2	1
		Proportion	0.00%	49.02%	1.96%	21.57%	49.02%	5.88%	3.92%	1.96%

Note: Multi-choices question

4) Large-scale transactions and management

Commercial timbers can be traded in the FTTC in packages based on townships. The packages of commercial timber will be done by the township forestry stations according to the locations and volume of timbers produced of each compartment. Generally, timber collected from different logged compartments at the same site or those with collection sites of different compartments close to each other, and at the same direction and route are put into packages, in principal, the timber volume of packages should not be less than 1000 m³, which can overcome the problem of forest lands and trees being scattered, therefore achieving transactions and management in a certain scale.

5) Assistance from full-time technical staff

Although there is no independent third-party assessment agency in forestry in the case study counties, but the Forestry Bureaus have organized participations in 2 national training on forest assets assessment, some participants have obtained qualification of asset assessment, laying a foundation for providing services to forest farmers.

(2) Disadvantages of transactions on the exchange

1) High transaction costs

The FTTC were established in county towns and prefecture towns; farmers have to go to the trading centers to make deals, which cause inconvenience and increases of transaction costs.

2) Weak competition among buyer enterprises leads to formation of buyer alliance

As government of Qiandongnan Prefecture has introduced policies to control the forestry enterprises, the governor personally approved the applications for establishing wood processing enterprises, it is hard for local enterprises to enter the market and even fewer opportunities for enterprises from other places, therefore, in the FTTC, there were limited numbers of buyers who can easily cooperate with each other. Once the number of bidders is not enough in an auction, other buyers will help the bidder by pretending to join the auction. When the market supply is less, buyers will negotiate and decide who is to get the bid in advance, therefore suppressing wood prices.

3) Longer time for completing a transaction on the exchange than outside the exchange

When the trading center receives a commission of timber auction from sellers, it will check the files in 2 working days, if requests can be met, it will accept the commission and inform representatives of the seller the time of auction five days in

advance, the trading center will release related information, such as the order, time, and number of auctions on the electronic display in the trading hall of the timber market and at the website of the trading center. Forest farmers and enterprises believe that the time of transactions on exchange will be longer than those of face to face transactions.

4.4.3 Comparison of transparency of transactions on and outside the exchange

1) Transparency of transactions outside the exchange

As there is not yet an established a standard assessment agency for forest resources, most transfers of forest lands are simply agreed prices, especially when some village officials have taken part in or take shares secretly it is likely to cause mass loss of collectively owned forest assets, damages to the interests of farmers, and lead to social conflicts. Furthermore, the growth period and harvesting rotations of trees or the duration of transfer of forest lands are long, forest farmers have a long transaction interval, and know little about market conditions, so they are in a weak position in obtaining information, in transactions, information obtained by two sides is asymmetric , and the interests of forest farmers is often damaged.

2) Transparency of transactions within the exchange

Auction is the main model of transactions conducted in the trading centers, and the number of bidders shall not be less than three, which makes more buyers compete with each other in the element market, the bidder offering the highest price will get the ownership of trees. Because the element market has a better understanding of market conditions, forest farmers can consult with staffs of the trading centers to determine a reasonable starting price and the buyers understand the market, under the premise of having reasonable profits, they can also increase the timber price, thus the transparency is higher than transactions outside the exchange.

5. Analysis of Performance and Transactions of the Trading Centers

5.1 Transactions, management system and operational procedures

Auctions have been conducted in the trading centers of Jianhe, Jinping, Huangping and Liping counties of Qiandongnan Prefecture. However, the level of development, the volume and value of transactions differed among the trading centers of different counties. The total value of transactions of the trading centers of all the counties was RMB 61.341549 million and the total transaction volume was 133,488.8m³ (Table 14).

The trading center is a service institutions for the forestry elements transaction, which is directly under the county Bureau of Forestry.

The Trading center is under the section level, which consists of five agencies, including offices, service centers for forest property transfer transactions, mortgage lending center, forest resources and assets assessment center, and forestry information dissemination center.

Table.14 Trading volume and amount of FTTC in case counties

County	Trading volume (10000m ³)	Trading amount (10000 元)	Trading times
Jianhe	0.3828	231.623	1
Jingping	6.30593	2891.2739	4
Huangping	0.97	414.488	1
Liping	5.690146	2596.77	5
Total	13.34888	6134.1549	11

5.2 The existing business and other services provided

Currently, the trading center of forest ownerships in each case study county of Qiandongnan Prefecture has services of information dissemination, Forest tenure trade, registration of forest ownerships, and evaluation of forest assets, mortgage loans on forest ownerships, integrated forestry services, and display of forest products. But evaluation of forest resources and mortgage loans on forest ownerships in Jianhe County and Liping County have not been started yet, and are therefore without any business volume (Table 15).

Table.15 Services of FTTC in case counties

Services	County
Forestry information releasing	Jianhe, Jingping, Huangping, Liping
registration of forest ownerships	Jianhe, Jingping, Huangping, Liping
Forest tenure trade	Jianhe, Jingping, Huangping, Liping
Forest assets appraisal	Jingping, Huangping
Mortgage	Jingping, Huangping
Display of forestry products	Jianhe, Jingping, Huangping, Liping
Integrated forestry services	Jianhe, Jingping, Huangping, Liping

5.3 Advantages and disadvantages of forest ownership trading centers

Compared to other models of transactions, the advantage of trading center of forest ownerships to both buyers and sellers is the standard transactions and transfers. Because the trading centers were established and managed by the government, the process of transactions, are fair, equal and transparent; and it allows more accessibility to information on buyers and sellers, timber prices, and consulting service; the approaches to transactions are legal, therefore the transactions can be more secured. Meanwhile, after the auction is done in the FTTC, the centers can immediately issue the logging permit, transport permit and other permits, which are more convenient and transparent than private transactions.

Our questionnaires survey on forest farmers and timber middleman showed that an important reason why many forest farmers and middlemen conduct private transactions is that the residence places of forest farmers are far away from the county towns, the volume of timber to be traded is small, and the procedures of obtaining various permits are complicated, there is little left from the income after deductions of the transportation fee and cost of getting the permits, many forest farmers therefore choose the model of private transactions; As for the timber middleman, they are familiar with the procedures, and can collect the scattered timbers of forest farmers together to apply for the permits, to process or to sell, they can make a certain amount of profit by putting in scale, furthermore, they know the market price of timbers, when they buy the timbers from the forest farmers, generally they will keep the prices down, which will also form a certain profit margin, this is an important reason why main transactions were made in private before the establishment of FTTC in the case study counties.

For forest farms and forest farmers as sellers, auction in the FTTC has the advantage of increasing the transaction prices of timber, standing trees and forest lands, hence increasing their income. The increase of income will then motivate them to enlarge their input, and promote the development of forestry production.

For timber processing enterprises as the bidders, they can get more timber as raw materials with good quality by price competition in the FTTC. Especially for large-scale processing enterprises, compared to private transactions, they are more willing to get large volume of raw materials needed for production through auctions at the trade centers. Through this model of transaction, the purchase price of the timbers seems high though, in fact they save costs of sending staffs to acquire the timbers when compared to private transactions, meanwhile, it ensures the supply of raw materials to processing industry.

Compared to other trading models, transactions in the trading centers also have its disadvantages. First of all, the establishment cost of the trading centers is more expensive than other models of transaction; Secondly, For forest farms and forest

farmers as the sellers, most of them live in places far from the trading centers, it will increase their cost of transport, if they go to conduct the transactions in the trading centers, especially for the forest farmers with little volume of timbers; Thirdly, because the transactions time in the trading centers is fixed to certain hours, compared to the private transactions outside exchange, it is not flexible enough.

For timber processing enterprises as bidders, when they conduct auctions in the trading centers, the price of transfer will be little higher, so it increases the purchase cost of timber as raw material.

5.4 Experiences and lessons learned from operations in the FTTC

5.4.1. Experiences in operating the FTTC

(1) Attention to element market by prefecture government

During the reform of forest ownerships, while the reform was vigorously promoted in Qiandongnan Prefecture, greater efforts were also made on supporting reforms in the related areas. On November 2007, based on experiences obtained in the pilot reforms Jinping, the prefecture government issued "Advice of prefecture people's government on the establishment of a forest ownership trading center". In November 2008, prefecture people's government also approved the establishment of a management center for forest ownership trading centers in Qiandongnan Miao and Dong Autonomous Prefecture, and a website was established for the forest ownership trading center of Qiandongnan Prefecture as a service platform to provide forest farmers and enterprises with convenient and efficient forestry information and transactions of timber. In February 2009, it issued "A Notice of the prefecture people's government on expediting the development of a market of forestry elements", and the establishment of a forest ownership trading center was included in criteria for assessing the forest ownership reform.

(2) Attention given by the Prefecture Forestry Bureau

According to the "Advice of Prefecture People's Government on Establishment of a Market of Forestry Elements", in order to standardize the market conduct of forestry element, the Prefecture Forestry Bureau developed and issued some documents for standardization such as "Management rules of Forest Ownership Registration in Qiandongnan Prefecture (Trial)", "Rules for assessment of Forest Resources and Assets in Qiandongnan (Trial)", "Management rules for transfer of Forests and Forest Lands in Qiandongnan Prefecture (Trial)", "Management Rules of Public Welfare Forests in Qiandongnan Prefecture (Trial)", "Regulations on Information Collection and Dissemination in the Market of Forestry Elements in Qiandongnan Prefecture (Trial)", providing guidance in all counties and municipalities.

In deepening the reform of collective forest ownerships, the greatest difficulty Qiandongnan Prefecture encountered was the lack of personnel to evaluate the forest resources and assets, so it is difficult to carry out the assessment, and the lags of assessment to forest resources and assets will affect the progress of a series of supporting reforms for transparent, fair and equal transfers of forests, trees and forest lands. And the key of promoting assessment of forest resources and assets is personnel resources, in order to solve the "bottleneck" of personnel in evaluating the forest resources and assets in the whole prefecture, the Prefecture Forestry Bureau of Qiandongnan contacted the State Forestry Administration and got support from the SFA, it helped the prefecture to train nearly 70 persons to evaluate the forest resources and assets in Wuhan.

(3) Attention given by the Forestry Administration in Case Study Counties

Although the establishment of element market in Qiandongnan Prefecture regulates the conduct of transactions, but both buyers and sellers of forest ownerships need go to trading centers located in Kaili, capital city of the prefecture, transaction costs were relatively high, therefore highly efficient, reasonable and fair platforms for both parties of transactions were needed, all the case study counties positively responded by setting up forest ownership trading centers in respective counties, and the relevant leader of county Forestry Bureau (Deputy Director) is responsible for the development of forest ownership trading centers. In order to strengthen the development of forest ownership trading centers, the trading centers established exchange and learning mechanism. All case study counties, in forms of network, training, and workshops actively engaged in inter-county, provincial and even international activities of forestry property rights exchange and learning to learn lessons.

(4) Useful attempts at all trading centers to standardize the transfer of forest ownerships

Each forest ownership trading center conscientiously has implemented relevant policies developed by the Prefecture Government on development of forest ownership trading centers. In the operation of the forest ownership trading centers, good attempts were made to regulate the transfer of forest ownerships.

1) The model of auctions by competitive bidding used by the forest ownership trading centers

There are auction and negotiation for timber transactions in the forest ownership trading centers, both of them can be used. However, in each transaction, auction was tried first, and followed by negotiation if auction was failed, in this way the timber price would be more favorable to buyers.

2) Package sales of commercial timbers is favorable for enlarging the scale of transactions

Commercial timber traded in the trading centers of the case study counties in Qiandongnan Prefecture, in principle should take the town (township) as a unit for package transaction, which can overcome the problem of scattered forest lands and small scale of transactions. The packages were made by township forestry stations according to locations of the harvested timber and timber volume of each compartment defined in the harvesting plan. A package should meet the following conditions: (1) Logged compartments or timber collection sites close to each other, and the compartments are in the same slope and same logging route; (2) The volume of logs in principle should be no less than 1,000 cubic meters, except for exceptional circumstances; (3) By discussion, the involved stakeholders are willing to be packaged together.

3) Forest ownership trading centers provides memberships to buyers

Timber processing enterprises which have obtained timber processing license according to law, registered in the business management authority and have the status of independent legal person can apply for a buyer membership to the forest ownership trading centers, members are divided into three levels, respectively corresponding to the first, second and third classes enterprises defined in the "Rules for rating timber processing enterprises in Qiandongnan Prefecture (Trial)". Those which obtained a membership in the FTTC can go ahead for timber transactions. The management center of forest ownership transactions will suggest the rating evaluating group to reduce the rating or cancel the qualification for timber processing of members who breach the contract in the transaction, in order to help improve the rate of contract enforcement.

4) Promotion of standardized taxation

In the past, in order to control export of logs to other countries through making the export non-profitable, all counties or municipalities have raised the baseline of taxation to increase the taxes, and in some counties the taxes can be as high as RMB 375 per cubic meter. This not only affects the development of enterprises, but also hurts the interests and the enthusiasm of forest farmers to manage and protect forests, because enterprises will transfer the high taxes to the forest farmers. Because of these, the "Notice of Qiandongnan Prefecture People's Government on speeding up the development of forestry elements market" regulates, collection of taxes and fees by the offices and forestry authorities of prefecture, county (municipality) government of Qiandongnan must follow the laws and regulations and set the contract value of timber transaction in the management center of forestry elements market as the baseline for taxation, it strictly prohibits cities and counties to raise the tax baseline on

their own, which effectively prevents every city and county from arbitrarily increasing the tax baseline and damaging legitimate interests of enterprises and forest farmers.

5) Promotion of standardization of transfers of forest lands and forests

Due to the limit by forest cutting quota and forest farmers' difficulty getting cutting quota, the transfer of standing trees is very active, but lacking an open and fair platform for transactions of forest ownerships, plus the information of both parties is asymmetrical, the interests of forest farmers therefore cannot be ensured. Therefore, the "Notice of Qiandongnan Prefecture People's Government on speeding up the development of forestry elements market" regulates, the transfer transactions of forests and forest lands in all counties (municipalities) must be listed in the forestry elements market, all the transfers should follow the law and regulations, and accept guidance and supervision from the prefecture management center for forestry elements market. It strictly prohibits any private illegal transfer conduct of forests and forest lands to cheat the forest farmers. Forests and forest lands not transferred in the forestry elements market according to law are not allowed to register exchange of ownerships and plan for any timber production, therefore, the legitimate rights and interests of collectivity and forest farmers can be effectively protected.

6) Promotion of a transparent allocation of cutting quota

with respect to the management of cutting quota of collective forests, county level forestry authorities, based on the annual plan of commercial timber harvest assigned by prefecture authorities, according to the actual situations of forest resources, resource protection, operating management capacity, harvest demand in each township (town) and village (group) or individual, following the principles of transparency, fairness and equality, develop rules for allocating cutting quota of the collective forests, and assign the cutting quota to township (town), village (group) or individual. Meanwhile, the quota was publically announced for questioning, unless there was no objections, then the cutting quota was officially enforced, therefore, the equal rights of harvesting trees according to law can be ensured.

5.4.2. Lessons learned from operation of the forest ownership trading centers

(1) Inadequate supporting policies on forest ownership transfer affected the normal operation and activeness level of transfer of forest ownerships in the trading centers.

1) Enforcement regulations on transfers outside exchange have not yet been developed,

2) Lack of correct guidance and standards.

3) Policies on harvest quota and logging ban on natural forest need to be

improved, because the current policies caused difficulty in implementation of timber disposal rights of forest farmers;

4) Forestry taxes and fees are still too heavy, the benefits given to forest farmers are limited (Although the number of taxation items decreased greatly, the decreased amount of levied taxes is limited), which restrains the enthusiasms in afforestation, silviculture and investing in forestry production and management of stakeholders in the forestry industrial chain such as forest farmers, forest farms and enterprises.

5) The amount of ecological compensation for public welfare forests is too low, and the compensation fund has not yet been arranged, which suppresses the enthusiasm of forest farmers and forest farms to manage and protect public welfare forests;

6) The development of forestry cooperative economic organizations drop behind, small-scale forestry production of forest farmers is hard to link with the market;

7) The benefit allocation mechanism of rural collective forest farms is imperfect and the development of large-scale forestry operation faces crisis;

8) The policy-based forest insurance has not yet commenced, the risk is high for afforestation and forest management by forest farmers and forest farms;

9) Reform of forestry investment and financing system has not followed up and implemented, procedures of mortgage loans are complicated, and the loan duration is short and the mortgage rate is low, it is difficult to solve the funding bottleneck for forest farmers and forestry farms;

10) The inadequate support to intermediate service agencies in the forest ownership transfer market resulted in poor development of mechanisms of market-oriented operation of forest ownership transfers;

11) It lacks leading enterprises in forestry; the development of forestry industrialization has fallen behind, the stakeholders of forestry chains links with each other in a loose manner, and in the mechanism of profit sharing.

(2) Negative impacts driven by the government

As the policy environment for forest ownership transfer has yet to be optimized, and the level of market developing is low, when the establishment and operation of forest ownership trading centers promoted by Government it brings some negative impacts.

1) There are too few recipients of forest ownership in the trading centers. Timber merchants and capital from outside the forestry sector are difficult to enter, thus it

forms a pattern of monopoly with recipients of forest ownerships, and transfer price of forest ownership is low. To standardize the transfer on exchange, and restrict speculative selling and buying, the related rules on “Regulations” restrict the activeness level of transactions on exchange. For example, “Regulations” requests that commercial timber must be traded in the trading centers, and harvesting permits can only be granted after completion of the successful transaction; According to the “Regulations”, a membership system was adopted for the recipients of transfers of forest ownership, i.e. obtained a permit for timber processing according to law, registered in the authority of business management sector as an independent legal person, and have paid a lump sum guarantee deposit when registering at the forestry element market (Class 1 membership: RMB 150,000; Class 2 membership: RMB 100,000; Class 3 membership 3: RMB 50,000); In principle, wood volume of the transactions should be no less than 1000m³; Transfer of collective and state-owned forest ownerships must be assessed, and 2 auctions per month should be carried out in the trading centers. Additionally, the nature of heavy weight, difficulty in transport and high taxation on-export of wood, increases the auction cost for enterprises coming from other counties, often leading to monopoly and collusion by the bidders in transactions, causing accompany-bidding, string-bidding and auction failure.

2) During the forest ownership transfer on exchange, forestry functional sectors play the roles of both intermediate service agencies and administrative authority, not only builders of the trading centers, but also operators of the centers, to be true, trading centers organized by government organizations and administrative agencies can substitute the absence of intermediate agencies. However, in the long run, long-term play of the main roles by government and its functional departments in economic activities will hinder the sound development of market mechanism. Therefore, opportunely promoting market-oriented operation of forest ownership transfers is of vital importance.

6. Analysis of the Attitudes of Different Stakeholders

6.1 Staff of the forest ownership trading centers

6.1.1 Forest ownership transfers in case study counties

40% of the center’s staff said there were more people transferring forest ownership outside the centers in case study counties currently (table 16). For the reasons why forest farmers choose outside dealings, 80% of the center’s staff think outside dealings are convenient, 50% believe it saves trading costs, and 40% consider that forest farmers have no idea about the existence of the trading center, they are lack understanding of the relevant service functions of the center, and 10% of them look for the middlemen who try to get harvesting quota (table 17).

Table.16 Trade outside of FTTC in FTTC staff's opinion

County	Number of the surveyed		No trade outside of FTTC			
				seldom	Small number	More
Jianhe	1	Number	0	0	0	1
		Proportion	0.0%	0.0%	0.0%	100.0%
Jingping	2	Number	0	0	0	2
		Proportion	0.0%	0.0%	0.0%	100.0%
Huangping	5	Number	0	3	2	0
		Proportion	0.0%	60.0%	40.0%	0.0%
Liping	2	Number	0	0	1	1
		Proportion	0.0%	0.0%	50.0%	50.0%
Total	10	Number	0	3	3	4
		Proportion	0.0%	30.0%	30.0%	40.0%

Tab.17 Reasons to not choose FTTC for farmers in FTTC staffs'opinion

County	Number of the surveyed		Do not know FTTC	Trade volume too small to trade in FTTC	Easy to trade outside of FTTC	Cost saving	Hardly to get logging permit for themselves
Jianhe	1	Number	0	0	1	1	0
		Proportion	0.00%	0.00%	100.00%	100.00%	0.00%
Jingping	2	Number	0	0	2	2	0
		Proportion	0.00%	0.00%	100.00%	100.00%	0.00%
Huangping	5	Number	2	0	3	2	1
		Proportion	40.00%	0.00%	60.00%	40.00%	20.00%
Liping	2	Number	2	0	2	0	0
		Proportion	100.00%	0.00%	100.00%	0.00%	0.00%
Total	10	Number	4	0	8	5	1
		Proportion	40.00%	0.00%	80.00%	50.00%	10.00%

Note: Multy-choices question

6.1.2 Staff's appraisals of the forest ownership trading Center

1) Lack of funds.

The center operates without dedicated funding and lacks supporting policies and finance capital support. Funds and the salaries of supernumerary staff principally come from the forestation fund and forestry related fees. Therefore, personnel and operating expenses should be included in the fiscal budget.

2) Lack of staffing and loss of staff.

The existing staffing belongs to forestry bureaus, and is held as a part-time job by the staff of the related functional section offices of county forestry bureaus, which curbs staff's enthusiasm, affects the daily work of forestry bureaus, and makes it hard to prevent the employees from leaving, who were recruited alone and have no establishment. For these reasons, the number of staff, posts and responsibilities should be fixed at staffing and institutional level.

3) Weakening of service functions and the prominent role of administrative examination and approval.

At present, the center concentrates on functions of issuing certificates and tax collection such as review and approval of forest harvesting permits, certificates of wood processing and transport, forest logging and timber transport, certificates of sales tax collection, tax levy management, etc. At the same time, state taxes (value-added taxes), local taxes (business taxes) and the forestation fund were separated after the Natural Forest Protection Program, making it hard to offer a series and one-stop convenient services and increasing the trading costs of forestry managers. However, forest ownership mortgage loan, assets assessment, forest ownership transfer, policy advisory, timber prices and supply and demand advisory service functions are relatively weakened.

4) The scope of asset assessment qualifications is limited.

The center's staff only possesses an assessment qualification under USD 1 million after their training of forest assets assessment. Meanwhile, the high cost of market-oriented independent third party assessment (5% of the transaction value) and unavailability of qualified assessment agencies within the county territory constrain assessment of forest assets, which serves as the precondition of forest ownership transfer. Simultaneously, the effective demands for forest assets assessment by the main parties of forest ownership transfers are deficient.

5) The recipient of forest ownerships lack competitive mechanism and the trend of monopolization pattern is obvious

Enterprises that participate in inside transfer have triple constraints: timber

transport license (the cross-province transport licenses must be handled by the prefecture governments), wood processing license (must be handled by the prefecture governments, with RMB 3 million of liquid capital and RMB 3 million of fixed assets required) and high log tax (it refers to the tax for wood processing), which respectively shut out the wood processing enterprises outside the county and lumber merchants, or increase the costs to the enterprises outside the county which want to enter a bid. Therefore, in reality, there are less wood processing enterprises participating in inside auction, resulting in collusion and conspiracy to tender.

6) It is necessary to standardize forest ownership transfer

The staff of forest ownership trading centers thinks it is necessary to standardize forest ownership transfer, and this will reduce the disputes of outside transfer, guarantee the legitimate interests of forest farmers, and increase the transfer rates (table 18).

Table.18 Reasons to standardize forest tenure trade in FTTC from staff

County	Number of the surveyed		More disputes in trade outside of FTTC	safeguard the farmers' interest	Increase forest tenure trade	Help to guide farmers trade tenure as development of industry	Keep FTTC operating	Little interest from trade outside of FTTC for farmers
Jianhe	1	Number	1	1	0	0	0	0
		Proportion	100.00%	100.00%	0.00%	0.00%	0.00%	0.00%
Jingping	2	Number	1	1	1	1	0	1
		Proportion	50.00%	50.00%	50.00%	50.00%	0.00%	50.00%
Huangping	5	Number	2	3	3	4	2	0
		Proportion	40.00%	60.00%	60.00%	80.00%	40.00%	0.00%
Liping	2	Number	0	2	1	2	0	0
		Proportion	0.00%	100.00%	50.00%	100.00%	0.00%	0.00%
Total	10	Number	4	7	5	7	2	1
		Proportion	40.00%	70.00%	50.00%	70.00%	20.00%	10.00%

Note: Multi-choices question

6.1.3 Direction for improving forest ownership transfers

To help the two parties of forest ownership transfer to trade in a better way, the center's staff thinks that more efforts should be made to enhance evaluation capacity,

intensify propaganda and reduce transfer expenses (table 19).

Table19 Suggestions to improve efficiency of FTTC form its staff

County	Number of the surveyed		Do more publicity	Visiting services	Provide subsidy to reduce traffic cost	enhance evaluation capacity	Reduce trade expenses	Improve ability to manage
Jianhe	1	Number	1	1	0	1	0	0
		Proportion	100.0%	100.0%	0.0%	100.0%	0.0%	0.0%
Jingping	2	Number	1	0	0	2	1	1
		Proportion	50.0%	0.0%	0.0%	100.0%	50.0%	50.0%
Huangping	5	Number	5	3	0	5	3	0
		Proportion	100.0%	60.0%	0.0%	100.0%	60.0%	0.0%
Liping	2	Number	2	2	1	2	1	0
		Proportion	100.0%	100.0%	50.0%	100.0%	50.0%	0.0%
Total	10	Number	9	6	1	10	5	1
		Proportion	90.0%	60.0%	10.0%	100.0%	50.0%	10.0%

Note: Multi-choices question

6.2 Stakeholders

6.2.1 Forestry Processing Enterprises

(1)Employees' awareness of forest ownership trading centers

90.9% of the employees of forestry processing enterprises know of forest ownership trading centers (table 20), and 68.18% of them know it through propaganda of county and township forestry functional departments (table 21). The functions of forest ownership trading centers known by enterprises are mainly to provide information and help with forest ownership transfer (table 22), while employees think forest ownership trading centers need to provide asset appraisal in addition to information (table 23).

Table20 Cognition of FTTC for employees of forestry enterprises

County	Number of the surveyed		Yes	No
Jianhe	6	Number	5	1
		Proportion	83.3%	16.7%
Jingping	4	Number	3	1
		Proportion	75.0%	25.0%
Huangping	7	Number	7	0
		Proportion	100.0%	0.0%
Liping	5	Number	5	0
		Proportion	100.0%	0.0%
Total	22	Number	20	2
		Proportion	90.9%	9.1%

Table21 Channels to know FTTC for employees of forestry enterprises

County	Number of the surveyed		FTTC	Farm-ers	Broad-cast	TV	Internet	Newspaper	Relatives and friends	Forestry departments	others
Jianhe	6	Number	0	0	1	1	0	0	0	4	
		Proportion	0.00%	0.00%	16.67%	16.67%	0.00%	0.00%	0.00%	0.00%	66.67%
Jing-ping	4	Number	0	0	0	0	0	1	0	2	0
		Proportion	0.00%	0.00%	0.00%	0.00%	0.00%	25.00%	0.00%	0.00%	50.00%
Huang-ping	7	Number	1	0	0	0	0	0	0	5	1
		Proportion	14.29%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	71.43%
Liping	5	Number	0	0	0	0	0	0		4	1
		Proportion	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	80.00%
Total	22	Number	1	0	1	1	0	1	0	15	2
		Proportion	4.55%	0.00%	4.55%	4.55%	0.00%	4.55%	0.00%	0.00%	68.18%

Note: Multy-choices question

Table22 The functions of FTTC the respond employees of forestry enterprises knew

County	Number of the surveyed		Traders information	Price information service	Forest tenure trade	Help to mortgage	Help to forest insurance	Assets appraisal	Logging permit service	No idea
Jianhe	6	Number	6	3	1	0	0	0	0	0
		Proportion	100.00%	50.00%	16.67%	0.00%	0.00%	0.00%	0.00%	0.00%

Jingping	4	Number	3	2	2	2	2	2	0	0
		Proportion	75.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	0.00%
Huangping	7	Number	6	3	4	0	0	3	1	1
		Proportion	85.71%	42.86%	57.14%	0.00%	0.00%	42.86%	14.29%	14.29%
Liping	5	Number	3	4	2	1	0	0	0	0
		Proportion	60.00%	80.00%	40.00%	20.00%	0.00%	0.00%	0.00%	0.00%
Total	22	Number	18	12	9	3	2	5	1	1
		Proportion	81.82%	54.55%	40.91%	13.64%	9.09%	22.73%	4.55%	4.55%

Note: Multy-choices question

Table23 Desired functions of FTTC for staff of forestry enterprises

County	Number of the surveyed	Informa tion service	Help to mortgage	Forest tenure trade	Assets appraisal	Help to Forest insurance	Logging permit service	
Jianhe	6	Number	3	1	1	3	1	
		Proportion	50.00%	16.67%	16.67%	50.00%	16.67%	0.00%
Jingping	4	Number	4	2	2	2	2	0
		Proportion	100.00%	50.00%	50.00%	50.00%	50.00%	0.00%
Huangping	7	Number	3	3	2	3	3	1
		Proportion	42.86%	42.86%	28.57%	42.86%	42.86%	14.29%
Liping	5	Number	3	0	2	1	0	0
		Proportion	60.00%	0.00%	40.00%	20.00%	0.00%	0.00%
Total	22	Number	13	6	7	9	6	1
		Proportion	59.09%	27.27%	31.82%	40.91%	27.27%	4.55%

Note: Multy-choices question

(2)Enterprises' forest ownership trading

All the current forest ownership transfers of the surveyed enterprises involve forest ownerships rather than use rights of forest lands. All the surveyed enterprises expressed interests to receive ownership transfers of forest lands or forests (table 24), but differ in acceptance of forest ownership trading centers. In the willingness to choose transactions on exchange, 37.5% of employees consider that the transfers in the trading centers are standardized, legal and guaranteed, 12.5% believe that the transfer prices of the trading centers are more rational and the transfer procedures and programs are simple, and 12.5% think that the trading center provides fair and

highly-efficient information, it is a requirement of the forestry bureaus, it can help to resolve disputes, and other enterprises all do it (table 25). In the willingness to choose outside transactions, 42.86% of employees consider that the transfer procedures and programs of the trading centers are complicated, 28.57% think that the center has low trading prices, free transactions and unilateral negotiations, and 14.29% choose the high inside-transaction costs and taxes, visibility of qualifications of the entities, understanding of the total volume, formalization of inside transfer, etc. as the reasons (table 25). In the willingness to choose both inside and outside transactions, employees understand the advantages and disadvantages of inside and outside transactions from different perspectives. The reasons for the selection of their willingness are shown in table 26.

Table24 Willingness of forest tenure trade for forestry enterprises

County	Number of the surveyed	Number of purchase willingness	Purchase ways			
			In FTTC	Outside of FTTC	Both	
Jianhe	6	number	6	1	3	2
		Account for number of purchase willingness		16.67%	50.00%	33.33%
		Account for the total	100.00%	16.67%	50.00%	33.33%
Jingping	4	number	4	1	1	2
		Account for number of purchase willingness		25.00%	25.00%	50.00%
		Account for the total	100.00%	25.00%	25.00%	50.00%
Huangping	7	number	7	2	2	3
		Account for number of purchase willingness		28.57%	28.57%	42.86%
		Account for the total	100.00%	28.57%	28.57%	42.86%
Liping	5	number	5	3	2	0
		Account for number of purchase willingness		60.00%	40.00%	0.00%

		Account for the total	100.00%	60.00%	40.00%	0.00%
Total	22	number	22	7	8	7
		Account for number		31.82%	36.36%	31.82%
		of purchase				
		willingness				
		Account for the total	100.00%	31.82%	36.36%	31.82%

Table25 Choose to trade in or outside of FTTC and reasons for the employees of forestry enterprises

County	Jianhe		Jingping		Huangping		Liping		Total	
	Number	Proportion	Number	Proportion	Number	Proportion	Number	Proportion	Number	Proportion
Number of choose to trade in FTTC	3		1		2		2		8	
Easy to access	1	33.33	1	100.00	0	0.00	0	0.00	2	25.00
Reasonable trade prices	2	66.67	0	0.00	0	0.00	0	0.00	2	25.00
Credible appraisal	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Full information	1	33.33	0	0.00	0	0.00	0	0.00	1	12.50
Subject to forestry bureau	0	0.00	0	0.00	1	50.00	0	0.00	1	12.50
Normal, fair and lawful trade	0	0.00	0	0.00	1	50.00	2	100.00	3	37.50
Help to settle disputes	0	0.00	0	0.00	1	50.00	0	0.00	1	12.50
Follow other enterprises	0	0.00	0	0.00	0	0.00	1	50.00	1	12.50
Number of choose to trade outside of FTTC	1		1		2		3		7	
Good prices	0	0.00	0	0.00	1	50.00	1	33.33	2	28.57
High cost and tax in FTTC	1	100.00	0	0.00	0	0.00	0	0.00	1	14.29

Reasons	Complicated procedures in FTTC	0	0.00	1	100.00	1	50.00	1	33.33	3	42.86
	Free trade and easy to negotiate	0	0.00	0	0.00	2	100.00	0	0.00	2	28.57
	Good understand to the forest	0	0.00	0	0.00	0	0.00	1	33.33	1	14.29
	Formalization in FTTC	0	0.00	0	0.00	0	0.00	1	33.33	1	14.29

Table26 Reasons to choose to trade in and outside of FTTC

	Number(Jianhe)	Number(Jingping)	Number(Huangping)	Total
Subtotal	2	2	3	7
Good faith in FTTC、 easy to trade outside of FTTC	1	0	0	1
Small trade size suited to trade outside of FTTC、 Subject to forestry bureau to choose FTTC	1	0	0	1
Big trade size in FTTC、 Small trade size suited to trade outside of FTTC	0	1	0	1
No differences	0	1	0	1
Good price outside but they need wood urgently	0	0	1	1
Good prices and free trade outside of FTTC, but also easy to access FTTC	0	0	1	1
Direct trade outside of FTTC, but big trade size in FTTC	0	0	1	1

(3)Enterprises' appraisals for the models of forest ownership trading

Enterprises' appraisals for the means of forest ownership trading are given in table 27.

1) Viewed from service attitude, the employees who present their assessments as very satisfactory, satisfactory and general for transaction on exchanges accounted for 63.6% of the total, but merely 22.7% for outside transactions.

2) Viewed from efficiency, the employees who present their assessments as very satisfactory, satisfactory and general for transaction on exchanges accounted for 63.6% of the total, but merely 54.5% for outside transactions.

3) Viewed from fairness, the employees who present their assessments as very satisfactory, satisfactory and general for transactions on exchange accounted for 54.5% of the total, but merely 40.9%.

4) Viewed from rationality of charging, the employees who present their assessments as very satisfactory, satisfactory and general for transactions on exchange accounted for 45.5% of the total, but merely 22.7% for outside transactions.

5) Viewed from effectiveness, the employees who present their assessments as very satisfactory, satisfactory and general for transactions on exchange accounted for 40.9% of the total, but merely 45.5% outside transactions.

Table 27 Degree of satisfaction to forest tenure trade in or outside of FTTC for forestry enterprises

County	Number of the surveyed	Degree of satisfaction	Service attitude		efficiency		Fair		Reasonable fees		timeliness		Others	
			In	Outside	In	Outside	In	Outside	In	Outside	In	Outside	In	Outside
			Number	Proportion	Number	Proportion	Number	Proportion	Number	Proportion	Number	Proportion	Number	Proportion
Jianhe	6	Very good	2	1	2	2	2	2	2	1	3	2	0	0
			33.33	16.67	33.33	33.33	66.67	33.33	33.33	16.67	50.00	33.33	0.00	0.00
	good	2	0	2	0	1	0	2	0	0	1	0	0	0
		33.33	0.00	33.33	0.00	16.67	0.00	33.33	0.00	0.00	16.67	0.00	0.00	0.00
	fair	1	0	1	0		0	0	0	0	1	0	0	0
		16.67	0.00	16.67	0.00	0.00	0.00	0.00	0.00	16.67	0.00	0.00	0.00	0.00
Jingping	4	Very good	0	0	0	0	0	0	0	0	0	0	0	0
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	good	0	0	0	1	0	1	1	1	0	0	1	0	0
		0.00	0.00	0.00	25.00	0.00	25.00	25.00	25.00	0.00	0.00	25.00	0.00	0.00
	fair	1	0	2	0	0	0	0	0	0	1	0	0	0
		25.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	25.00	0.00	25.00	0.00	0.00

unsatisfied	Number	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	Proportion	0.00	0.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Very	Number	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Proportion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Very good	Number	0	1	0	2	1	2	1	1	1	0	2	1	1	0	2	1	1	0
	Proportion	0.00	14.29	0.00	28.57	14.29	28.57	14.29	14.29	14.29	0.00	28.57	14.29	14.29	0.00	28.57	14.29	14.29	0.00
good	Number	2	0	2	1	1	0	1	0	1	0	0	1	0	0	0	0	1	1
	Proportion	28.57	0.00	28.57	14.29	14.29	0.00	14.29	0.00	14.29	0.00	0.00	14.29	0.00	0.00	0.00	0.00	14.29	14.29
fair	Number	1	0	2	1	1	0	0	1	0	1	0	1	0	1	1	0	0	0
	Proportion	14.29	0.00	28.57	14.29	14.29	0.00	0.00	14.29	14.29	0.00	0.00	14.29	0.00	14.29	0.00	14.29	0.00	0.00
unsatisfied	Number	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Proportion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Very	Number	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	Proportion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.29	0.00
unsatisfied	Number	3	3	1	3	2	0	1	1	1	0	2	1	0	2	0	0	0	0
	Proportion	60.00	60.00	20.00	60.00	40.00	0.00	20.00	20.00	20.00	0.00	40.00	20.00	20.00	40.00	0.00	0.00	0.00	0.00
good	Number	0	0	2	1	1	2	1	0	1	0	0	1	0	0	1	0	1	0
	Proportion	0.00	0.00	40.00	20.00	20.00	40.00	20.00	0.00	20.00	0.00	0.00	20.00	20.00	0.00	0.00	20.00	20.00	0.00
fair	Number	1	0	0	0	0	1	0	1	1	1	1	1	1	1	0	0	0	0
	Proportion	20.00	0.00	0.00	0.00	0.00	20.00	0.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	0.00
unsatisfied	Number	0	0	0	0	1	0	1	0	0	1	2	1	0	2	0	0	0	0
	Proportion	0.00	0.00	0.00	0.00	20.00	0.00	20.00	0.00	0.00	14.29	40.00	20.00	0.00	40.00	0.00	0.00	0.00	0.00

	Proportion	0.00	0.00	0.00	0.00	20.00	0.00	20.00	0.00	20.00	40.00	0.00	0.00
Very	Number	0	0	2	1	1	0	1	0	1	0	1	0
unsatisfied	Proportion	0.00	0.00	40.00	20.00	20.00	0.00	20.00	0.00	20.00	0.00	20.00	0.00
	Number	6	5	3	8	8	5	5	3	3	7	1	0
Very good	Proportion	27.27	22.73	13.64	36.36	36.36	22.73	22.73	13.64	13.64	31.82	4.55	0.00
good	Number	4	0	6	3	3	3	5	0	3	1	1	1
	Proportion	18.18	0.00	27.27	13.64	13.64	13.64	22.73	0.00	13.64	4.55	4.55	4.55
fair	Number	4	0	5	1	1	1	0	2	3	2	0	0
	Proportion	18.18	0.00	22.73	4.55	4.55	4.55	0.00	9.09	13.64	9.09	0.00	0.00
unsatisfied	Number	0	0	0	0	2	0	2	0	2	2	0	0
	Proportion	0.00	0.00	0.00	0.00	9.09	0.00	9.09	0.00	9.09	9.09	0.00	0.00
Total	22												

6.2.2 Small-scale Forest Farmers

(1) Forest farmers' awareness of forest ownership trading centers

1) There are few people who know of forest ownership trading centers

At present, forest farmers' awareness of forest ownership trading centers is low. When asked the question "Do you know of the forest ownership trading center", of the 218 forest farmers surveyed, only 18.3% know of the existence of forest ownership trading centers (table 28).

Table 28 Cognition to FTTC for forestry farmers

County	Number of the surveyed		Knew	Not know
Jianhe	47	Number	6	41
		Proportion	12.8%	87.2%
Jingping	57	Number	9	48
		Proportion	15.8%	84.2%
Huangping	53	Number	10	43
		Proportion	18.9%	81.1%
Liping	61	Number	15	46
		Proportion	24.6%	75.4%
Total	218	Number	40	178
		Proportion	18.3%	81.7%

2) The channels to know of forest ownership trading centers are limited.

Forest farmers know forest ownership trading centers mainly through propaganda of the county and township forestry functional departments, village cadres, television, relatives and friends, and the staff of forestry service centers, and the county and township forestry functions produce a greater effect. There are fewer people who know of forest ownership trading centers through other channels (table 29).

Table 29 Channels to know FTTC for forestry farmers

County	Number of who knew FTTC	TV	Broad- cast	News- paper	Relatives and friends	Neigh bours	Village official	Forestry department in county or township level	FTTC	Middle- men
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Jianhe	6	Num-ber	0	0	0	0	0	0	6	1	0
		Prop-ortion	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	16.67%	0.00%
Jingping	9	Num-ber	1	0	0	1	0	3	4	0	1
		Prop-ortion	11.11%	0.00%	0.00%	11.11%	0.00%	33.33%	44.44%	0.00%	11.11%
Huang-ping	10	Num-ber	1	0	0	0	0	1	6	0	1
		Prop-ortion	10.00%	0.00%	0.00%	0.00%	0.00%	10.00%	60.00%	0.00%	10.00%
Liping	15	Num-ber	1	0	0	2	1	1	10	2	0
		Prop-ortion	6.67%	0.00%	0.00%	13.33%	6.67%	6.67%	66.67%	13.33%	0.00%
Total	40	Num-ber	3	0	0	3	1	5	26	3	2
		Prop-ortion	7.50%	0.00%	0.00%	7.50%	2.50%	12.50%	65.00%	7.50%	5.00%

Note: Multi-choices question

3) Forest farmers lack of understanding of the current functions of forest ownership trading centers

When asked the question “what services do you know forest ownership trading centers actually provides”, according to the degree of awareness of the functions of forest ownership trading centers by forest farmers, from high to low are forest ownership transfer, timber license transaction, information consultation, mortgage loan transaction, forest assets assessment, charge of forestation fund, forest insurance agent, tax collection, policy advisory and auction design; whereas functions forest farmers think forest ownership trading centers should have, from high to low, are information advisory, forest ownership transfer, mortgage loan transaction, forest insurance agent, forest assets assessment, timber license transaction, policy advisory, charging of forestation fund and tax collection. By comparing the current functions of forest ownership trading centers with the functions that forest farmers hope to have, such functions as forest ownership transfer, information advisory and mortgage loan

collection, are all priority areas, reflecting the coherence between the existing functions and the functions that should exist. However, even for forest ownership transfer, the number of people who know it only accounts for 9.63% of the total number of people surveyed (table 30). When asked “what service items do you think the Forest ownership Trading Center should provide”, viewed from the demands of forest farmers, the services they need, from most to least, are information advisory, forest ownership transfer, mortgage loan transaction, forest insurance agent, forest assets assessment, timber license transaction, policy advisory, collection of forestation fund and tax collection. Despite the items needed by forest farmers have been included in the existing functions of forest ownership trading markets, forest farmers’ unawareness of some functions has resulted in the functions of the center unable to work properly.

Table30 The functions of FTTC the respondents knew

County	Number of the surveyed	Forest tenure trade		Help to mortgage insurance		Help to forest insurance		Assets appraisal		information		Policies information		Logging permit service		Forestation fund collection		Levy tax		No idea		Cutting plan and auction		Others		
		Number	Proportion	Number	Proportion	Number	Proportion	Number	Proportion	Number	Proportion	Number	Proportion	Number	Proportion	Number	Proportion	Number	Proportion	Number	Proportion	Number	Proportion	Number	Proportion	
Jianhc	47	Known	4	8.51%	5	10.64%	4	8.51%	4	8.51%	4	8.51%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
		Desired	7	14.89%	10	21.28%	8	17.02%	6	12.77%	10	21.28%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
		Known	4	8.51%	2	4.26%	0	0.00%	2	4.26%	3	6.38%	0	0.00%	3	6.38%	1	2.13%	1	2.13%	4	8.51%	0	0.00%	1	2.13%
		Desired	9	18.96%	6	12.77%	0	0.00%	3	6.38%	6	12.77%	6	12.77%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	2	4.26%	2	4.26%
Jingping	57	Known	5	8.77%	2	3.51%	1	1.75%	2	3.51%	2	3.51%	0	0.00%	4	7.02%	2	3.51%	2	3.51%	1	1.75%	1	1.75%	1	1.75%
		Desired	9	15.79%	6	10.53%	0	0.00%	3	5.26%	6	10.53%	6	10.53%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
		Known	3	5.26%	7	12.28%	7	12.28%	4	7.02%	4	7.02%	7	12.28%	4	7.02%	7	12.28%	4	7.02%	7	12.28%	4	7.02%	4	7.02%
		Desired	5	8.77%	2	3.51%	1	1.75%	2	3.51%	2	3.51%	2	3.51%	0	0.00%	4	7.02%	2	3.51%	2	3.51%	1	1.75%	1	1.75%
Huangping	53	Known	3	5.66%	7	13.21%	7	13.21%	4	7.55%	7	13.21%	4	7.55%	6	11.32%	3	5.66%	3	5.66%	0	0.00%	0	0.00%	0	0.00%
		Desired	5	9.43%	3	5.66%	1	1.89%	2	3.77%	3	5.66%	3	5.66%	4	7.55%	6	11.32%	2	3.77%	2	3.77%	1	1.89%	1	1.89%
		Known	3	5.66%	7	13.21%	7	13.21%	4	7.55%	7	13.21%	4	7.55%	6	11.32%	3	5.66%	3	5.66%	0	0.00%	0	0.00%	0	0.00%
		Desired	5	9.43%	3	5.66%	1	1.89%	2	3.77%	3	5.66%	3	5.66%	4	7.55%	6	11.32%	2	3.77%	2	3.77%	1	1.89%	1	1.89%
Liping	61	Known	8	13.11%	4	6.56%	2	3.28%	2	3.28%	4	6.56%	2	3.28%	7	11.48%	5	8.20%	3	4.92%	3	4.92%	0	0.00%	0	0.00%
		Desired	8	13.11%	4	6.56%	5	8.20%	5	8.20%	9	14.75%	9	14.75%	3	4.92%	3	4.92%	3	4.92%	0	0.00%	0	0.00%	0	0.00%
		Known	8	13.11%	4	6.56%	2	3.28%	2	3.28%	4	6.56%	2	3.28%	7	11.48%	5	8.20%	3	4.92%	3	4.92%	0	0.00%	0	0.00%
		Desired	8	13.11%	4	6.56%	5	8.20%	5	8.20%	9	14.75%	9	14.75%	3	4.92%	3	4.92%	3	4.92%	0	0.00%	0	0.00%	0	0.00%
Total	218		12	5.50%	7	3.21%	10	4.59%	10	4.59%	13	5.96%	2	0.92%	14	6.42%	8	3.67%	6	2.75%	8	3.67%	2	0.92%	2	0.92%

functions	Proportion	9.63%	5.50%	3.21%	4.59%	5.96%	0.92%	6.42%	3.67%	2.75%	3.67%	0.92%	0.92%
Desired	Number	27	27	20	18	32	7	15	6	6	2	0	6
functions	Proportion	12.39%	12.39%	9.17%	8.26%	14.68%	3.21%	6.88%	2.75%	2.75%	0.92%	0.00%	2.75%

Note: Multi-choices question. “others known functions” include measurement (1), “others desired functions” include free services and production information (1), speed up logging permit (1), free trade policies information (1), no explanation (3)。

Currently, there are more problems in forestry production that forest farmers have to face, primarily involving insufficient funds, shortage of skills, lack of forestry information, etc. (table 31), However, only 1.8% of forest farmers solve the above problems through forest ownership trading centers.

Table31 Problems facing in forest management for forest farmers

County	Number of the surveyed	Lack of information	Lack of capital	Lack of advanced technology	Hard to trade forest tenure	Severe disaster	Forest tenure dispute	Can not get economics of scale	Unlawfully felling trees	Limit of logging quota	Dispute	Others
Jianhe	47	Number 24	30	27	2	7	3	1	1	1	0	0
		Proportion 51.06%	63.83%	57.45%	4.26%	14.89%	6.38%	2.13%	2.13%	2.13%	0.00%	0.00%
Jingping	57	Number 15	19	16	6	3	3	0	0	2	0	0
		Proportion 26.32%	33.33%	28.07%	10.53%	5.26%	5.26%	0.00%	0.00%	3.51%	0.00%	0.00%
Huang-ping	53	Number 20	25	17	6	2	2	1	1	3	1	2
		Proportion 37.74%	47.17%	32.08%	11.32%	3.77%	3.77%	1.89%	1.89%	5.66%	1.89%	3.77%
Liping	61	Number 12	27	16	5	6	4	2	2	1	1	2
		Proportion 19.67%	44.26%	26.23%	8.20%	9.84%	6.56%	3.28%	3.28%	1.64%	1.64%	3.28%
Total	218	Number 71	101	76	19	18	12	4	4	7	2	4
		Proportion 32.57%	46.33%	34.86%	8.72%	8.26%	5.50%	1.83%	1.83%	3.21%	0.92%	1.83%

Note: Multi-choices question. “others” including high tax rate (1), lack of subsidy (1), hard to management (1), inconvenient traffic (1)

(2)Forest farmers’ appraisals for forest ownership trading centers

1) Overall appraisals for the different services of forest ownership trading centers

6.0% of the surveyed forest farmers have traded in forest ownership trading centers. In the service of forest ownership transfer, the percentage of the forest farmers who are unsatisfied or very unsatisfied with the trading center was 15.4%, the

forest farmers who are unsatisfied or very unsatisfied with the information advisory service and assets assessment service both accounted for 7.7%, and the forest farmers who are unsatisfied or very unsatisfied with the service of license transaction account for 15.4% (table 32).

Table32 Degree of satisfaction to forest tenure trade service of FTTC for forest farmers

County	Number of traders	Degree of satisfaction	Forest tenure trade							
			Information services	Assets appraisal	Mortgage	Forest insurance	Logging permit	Others		
Huangping	6	Very good	Number	0	0	0	0	0	0	0
			Proportion	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		good	Number	5	2	0	0	0	2	0
			Proportion	83.33%	33.33%	0.00%	0.00%	0.00%	33.33%	0.00%
		fair	Number	0	0	0	0	0	0	0
			Proportion	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		unsatisfied	Number	1	1	1	0	0	2	0
			Proportion	16.70%	16.70%	16.70%	0.00%	0.00%	33.30%	0.00%
		Very unsatisfied	Number	0	0	0	0	0	0	0
			Proportion	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		Very good	Number	1	1	1	0	0	2	0
			Proportion	14.30%	14.30%	14.30%	0.00%	0.00%	28.60%	0.00%
good	Number	1	2	0	0	0	0	0		
	Proportion	14.30%	28.60%	0.00%	0.00%	0.00%	0.00%	0.00%		
Liping	7	fair	Number	1	1	0	0	1	0	
			Proportion	14.30%	14.30%	0.00%	0.00%	14.30%	0.00%	
		unsatisfied	Number	1	0	0	0	0	0	
			Proportion	14.30%	0.00%	0.00%	0.00%	0.00%	0.00%	
		Very unsatisfied	Number	0	0	0	0	0	0	
			Proportion	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Very good	Number	1	1	1	0	0	2	0		
	Proportion	7.70%	7.70%	7.70%	0.00%	0.00%	15.40%	0.00%		
Total	13	good	Number	6	4	0	0	2	0	
			Proportion	46.20%	30.80%	0.00%	0.00%	15.40%	0.00%	
		fair	Number	1	1	0	0	1	0	
			Proportion	7.70%	7.70%	0.00%	0.00%	7.70%	0.00%	

unsatisfied	Number	2	1	1	0	0	2	0
	Proportion	15.40%	7.70%	7.70%	0.00%	0.00%	15.40%	0.00%
Very unsatisfied	Number	0	0	0	0	0	0	0
	Proportion	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

2) Appraisals for the service of forest ownership transfer

Regarding the service function of forest ownership transfer, forest farmers presented very satisfactory, satisfactory and general for service attitudes, reasonability of charges, effectiveness and prices. But for its efficiency and fairness, forest farmers are unsatisfied with the center, accounting for 14.29% of the people participating in transactions (table 33).

Table33 Degree of satisfaction to forest tenure trade service of FTTC for forest farmers

County	Number of traders	Degree of satisfaction	Service attitude	Service efficiency	Fair	Reasonable fees	Timeliness	Trade prices			
Huangping	6	Very good	Number	2	3	3	1	1			
			Proportion	33.33%	50.00%	50.00%	16.67%	16.67%	0.00%		
		good	Number	3	2	2	2	3	2		
			Proportion	50.00%	33.33%	33.33%	33.33%	50.00%	33.33%		
		fair	Number	0	0	0	0	0	1		
			Proportion	0.00%	0.00%	0.00%	0.00%	0.00%	16.67%		
		unsatisfied	Number	0	0	0	1	1	1		
			Proportion	0.00%	0.00%	0.00%	16.67%	16.67%	16.67%		
		Very unsatisfied	Number	0	0	0	0	0	0		
			Proportion	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
		Liping	7	Very good	Number	1	1	2	3	1	0
					Proportion	14.29%	14.29%	28.57%	42.86%	14.29%	0.00%
good	Number			3	1	0	0	3	3		
	Proportion			42.86%	14.29%	0.00%	0.00%	42.86%	42.86%		
fair	Number			0	2	2	1	1	2		
	Proportion			0.00%	28.57%	28.57%	14.29%	14.29%	28.57%		
unsatisfied	Number			0	1	1	0	0	0		
	Proportion			0.00%	14.29%	14.29%	0.00%	0.00%	0.00%		
Very	Number			0	0	0	0	0	0		
	Proportion			0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		

		unsatisfied	Proportion	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		Very good	Number	3	4	5	4	2	0
			Proportion	23.08%	30.77%	38.46%	30.77%	15.38%	0.00%
		good	Number	6	3	2	2	6	5
			Proportion	46.15%	23.08%	15.38%	15.38%	46.15%	38.46%
Total	13	fair	Number	0	2	2	1	1	3
			Proportion	0.00%	15.38%	15.38%	7.69%	7.69%	23.08%
		unsatisfied	Number	0	1	1	1	1	1
			Proportion	0.00%	7.69%	7.69%	7.69%	7.69%	7.69%
		Very unsatisfied	Number	0	0	0	0	0	0
			Proportion	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

3) Appraisals for information advisory service

In information transfer service, forest farmers who were not very satisfied and unsatisfied both account for 7.7% (table 34).

Table34 Degree of satisfaction to information service of FTTC for forest farmers

County	Number of traders	Degree of satisfaction	Service attitude	efficiency	Fair	Reasonable fees	timeliness	Trade prices	
Huangping	6	Very good	Number	0	0	0	1	0	0
			Proportion	0.0%	0.0%	0.0%	16.7%	0.0%	0.0%
		good	Number	3	3	2	2	2	0
			Proportion	50.0%	50.0%	33.3%	33.3%	33.3%	0.0%
		fair	Number	0	0	0	0	0	0
			Proportion	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		unsatisfied	Number	0	0	0	0	0	0
			Proportion	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		Very unsatisfied	Number	0	0	0	0	0	1
			Proportion	0.0%	0.0%	0.0%	0.0%	0.0%	16.7%
Liping	7	Very good	Number	1	1	1	1	1	0
			Proportion	14.3%	14.3%	14.3%	14.3%	14.3%	0.0%
		good	Number	0	1	0	0	0	0
			Proportion	0.0%	14.3%	0.0%	0.0%	0.0%	0.0%
		fair	Number	0	0	0	0	0	0
			Proportion	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

		Proportion	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		Number	1	0	0	0	0	0
	unsatisfied	Proportion	14.3%	0.0%	0.0%	0.0%	0.0%	0.0%
	Very	Number	0	0	1	0	1	0
	unsatisfied	Proportion	0.0%	0.0%	14.3%	0.0%	14.3%	0.0%
	Very good	Number	1	1	1	2	1	0
		Proportion	7.7%	7.7%	7.7%	15.4%	7.7%	0.0%
	good	Number	3	4	2	2	2	0
		Proportion	23.1%	30.8%	15.4%	15.4%	15.4%	0.0%
	fair	Number	0	0	0	0	0	0
		Proportion	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	unsatisfied	Number	1	0	0	0	0	0
		Proportion	7.7%	0.0%	0.0%	0.0%	0.0%	0.0%
	Very	Number	0	0	1	0	1	1
	unsatisfied	Proportion	0.0%	0.0%	7.7%	0.0%	7.7%	7.7%
Total	13							

6.2.3 Forestry Cooperative Economic Organizations

The number of the cooperative economic organizations in the case study counties that participate in the trading center is given in table 35.

Table.35 Number of farmer cooperatives in case counties

County	Number of farmer cooperatives	Number of forest farmer cooperatives	Cooperatives participated FTTC trade
Jianhe	23	3	0
Jinping	38	38	0
Huangping	33	1	0
Liping	--	2 (tea)	0
Total	94	44	0

The case study counties all paid much attention to the development of agricultural cooperative economic organizations, with the hope of improving farmers' degree of organization, but there are few forestry cooperative economic organizations, and none of them yet has participated in the transactions of forest ownership trading centers. Even if the forest ownership trading centers in the case study counties had

windows for product display and helped sell characteristic agricultural products, cooperatives now all look for markets by themselves to resolve the problems of product marketing, and the windows for product display of the forest ownership trading centers now are still in a listing state basically rather than actual operation. With the development and expansion of cooperatives and increase of products, the demands for forest ownership trading centers will increase. Because forest ownership trading centers can help find buyers by releasing information online and showing products in markets, this will reduce searching, negotiating and supervising costs for the further development of cooperatives, increase profits, enhance the second restitution to farmers, and arouse the manufacturing enthusiasm of farmers.

6.2.4 Middlemen

(1) Middlemen's knowledge on forest ownership trading centers

A total of 11 middlemen were surveyed. When asked “do you know anything about forest ownership trading centers”, 81.82% of the middlemen said yes (table 36). 66.67% of the middlemen know it through the propaganda of the county and township forestry functional departments. In the functions of forest ownership trading centers, 100% of the surveyed persons know the forest ownership transfer service of the centers (table 37), but only 66.67% of the middlemen said that they hoped the centers provide this service (table 38).

Table.36 FTTC cognition of middlemen

County	Number of the surveyed		Yes	No
Jinping	4	Number	2	2
		Proportion	50.00%	50.00%
Huangping	2	Number	2	0
		Proportion	100.00%	0.00%
Liping	5	Number	5	0
		Proportion	100.00%	0.00%
Total	11	Number	9	2
		Proportion	81.82%	18.18%

Table.37 The services of FTTC the respondents know

County	Respon dents know	Forest tenure trade	Help to apply mortga	Help to buy forest	Assets appraisa l	Informati on	Policies informat ion	Logging permit service	Forestatio n fund	Levy tax
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FTTC		ge insurance									
Jinping	2	Number	2	0	0	0	1	1	2	2	1
		Proportion	100.00%	0.00%	0.00%	0.00%	50.00%	50.00%	100.00%	100.00%	50.00%
Huangping	2	Number	2	0	0	1	2	1	1	1	1
		Proportion	100.00%	0.00%	0.00%	50.00%	100.00%	50.00%	50.00%	50.00%	50.00%
Liping	5	Number	5	0	0	1	2	0	5	5	3
		Proportion	100.00%	0.00%	0.00%	20.00%	40.00%	0.00%	100.00%	100.00%	60.00%
Total	9	Number	9	0	0	2	5	2	8	8	5
		Proportion	100.00%	0.00%	0.00%	22.20%	55.60%	22.20%	88.90%	88.90%	55.60%

Note: Multi-choices question

Table.38 Desired functions of FTTC for middlemen

County	Respo ndents know FTTC	Forest tenure trade	Help to apply mortgage	Help to buy forest insuranc e	Assets appraisa l	Informati on	Policies informat ion	Loggi ng permit service	Forestation fund	Levy tax	
Jinping	2	Number	0	1	0	0	1	1	2	1	1
		Proporti on	0.00%	50.00%	0.00%	0.00%	50.00%	50.00%	100.00 %	50.00%	50.00 %
Huangpi ng	2	Number	2	0	0	1	1	1	1	1	1
		Proporti on	100.00 %	0.00%	0.00%	50.00%	50.00%	50.00%	50.00 %	50.00%	50.00 %
Liping	5	Number	4	4	2	2	3	2	5	5	4
		Proporti on	80.00%	80.00%	40.00%	40.00%	60.00%	40.00%	100.00 %	100.00%	80.00 %
Total	9	Number	6	5	2	3	5	4	8	7	6
		Proporti on	66.67%	55.56%	22.22%	33.33%	55.56%	44.44%	88.89 %	77.78%	66.67 %

Note: Multi-choices question

(2)Influence of the forest ownership trading centers on middlemen

1) Role of forest ownership trading centers in the information acquisition for

middlemen

During transactions, 81.82% of middlemen gained the forest ownership transfer information through village cadres, and only 9.09% trade depending on the information released from forest ownership trading centers (table 39). Currently, the effects of the centers are not significant in the transactions between middlemen.

Table.39 Trade information sources for middlemen

County	Number of the surveyed		Forestry	FTTC	Forestry	village cadres
			department		station	
Jinping	4	Number	0	0	0	4
		Proportion	0.00%	0.00%	0.00%	100.00%
Huangping	2	Number	0	0	1	1
		Proportion	0.00%	0.00%	50.00%	50.00%
Liping	5	Number	2	1	3	4
		Proportion	40.00%	20.00%	60.00%	80.00%
Total	11	Number	2	1	4	9
		Proportion	18.18%	9.09%	36.36%	81.82%

Note: Multi-choices question

2) The role of forest ownership trading centers in the forest ownership transfers for middlemen

During transactions, 100% of middlemen have directly traded through farmers, and only for 9.1% of middlemen have traded through forest ownership trading centers (table 40).

Table.40 main channels to purchase forest tenure for middlemen

County	Number of the surveyed		forestry	collective	Joint	FTTC	Others
			farmers	tree farms	operation farmers		
Jinping	4	Number	4	2	2	0	0
		Proportion	100.0%	50.0%	50.0%	0.0%	0.0%
Huangping	2	Number	2	0	0	0	0
		Proportion	100.0%	0.0%	0.0%	0.0%	0.0%
Liping	5	Number	5	3	3	1	0
		Proportion	100.0%	60.0%	60.0%	20.0%	0.0%

Total	11	Number	11	5	5	1	0
		Proportion	100.0%	45.5%	45.5%	9.1%	0.0%

Note: Multi-choices question

(3) Middlemen's selection of trading places

81.8% of middlemen choose the model of outside transaction (table 41), and the major reasons for their choices are that private transfer is convenient, trading expenses can be saved, trading scale is unrestricted, and they have no idea about how to use the centers to transfer (table 42).

Table. 41 Choose to trade in or outside of FTTC for middlemen

County	Number of the surveyed		In FTTC	Outside of FTTC
Jingping	4	Number	3	2
		Proportion	75.0%	25.0%
Huangping	2	Number	1	1
		Proportion	50.0%	50.0%
Liping	5	Number	5	0
		Proportion	100.0%	0.0%
Total	11	Number	9	3
		Proportion	81.8%	27.27%

Note: Multi-choices question

Table.42 Reasons to not choose FTTC for middlemen

County	Traders outside of FTTC		Easy to trade outside of FTTC	No idea for FTTC	Do not know the trade procedure	Economic outside of FTTC	Higher fee for assets appraisal	Lower price in FTTC	No limit of trade size	Large range to choose
Jingping	3	Number	0	2	1	1	0	0	1	0
		Proportion	0.00%	66.67%	33.33%	33.33%	0.00%	0.00%	33.33%	0.00%
Huangping	1	Number	1	0	1	0	0	1	0	0
		Proportion	100.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%

		Number	5	0	1	4	1	0	2	1
Liping	5	Proportion	100.00%	0.00%	20.00%	80.00%	20.00%	0.00%	40.00%	20.00%
		Number	6	2	3	5	1	1	3	1
Total	9	Proportion	66.67%	22.22%	33.33%	55.56%	11.11%	11.11%	33.33%	11.11%

Note: Multi-choices question

27.27% of middlemen choose the model of transaction on exchange, and among the middlemen selecting transaction on exchange, 100% think the trading prices of the centers are much higher (table 43).

Table.43 Reasons why middlemen choose FTTC

County	Middlemen in FTTC		Good transfer price	Easy to access	Credible assessment	Large scale of trade	Cannot sell outside of FTTC
Jingping	2	Number	2	0	0	0	1
		Proportion	100%	0%	0%	0%	50%
Huangping	1	Number	1	0	0	0	0
		Proportion	100%	0%	0%	0%	0%
Liping	0	Number	0	0	0	0	0
		Proportion	0%	0%	0%	0%	0%
Total	3	Number	3	0	0	0	1
		Proportion	100%	0%	0%	0%	33%

Note: Multi-choices question

(4) Middlemen's appraisals of forest ownership trading centers

The middlemen all expressed great satisfaction or satisfaction over the forest ownership transfer, information advisory and license transaction service. They didn't rate any other functions as unsatisfactory or not very satisfactory (table 44).

Table.44 Degree of satisfaction of the services of FTTC to the middlemen

County	Number of traders	Degree of satisfaction	Forest tenure trade	Information	Assets appraisal	mortgage	Forest insurance	others	Logging permit
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									service		
Jing-ping	4	Very good	Number	0	0	0	0	0	0		
			Proportion	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
		good	Number	2	1	0	0	0	0	1	
			Proportion	50.00%	25.00%	0.00%	0.00%	0.00%	0.00%	25.00%	
		fair	Number	0	0	0	0	0	0	0	
			Proportion	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
		Unsatisfied	Number	0	0	0	0	0	0	0	
			Proportion	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
		Very unsatisfied	Number	0	0	0	0	0	0	0	
			Proportion	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
		Huang-ping	2	Very good	Number	1	0	0	0	0	0
					Proportion	50.00%	0.00%	0.00%	0.00%	0.00%	0.00%
good	Number			1	1	0	0	0	0	2	
	Proportion			50.00%	50.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
fair	Number			0	1	0	0	0	0	0	
	Proportion			0.00%	50.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Unsatisfied	Number			0	0	0	0	0	0	0	
	Proportion			0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Very unsatisfied	Number			0	0	0	0	0	0	0	
	Proportion			0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Liping	5			Very good	Number	2	4	0	0	0	1
					Proportion	40.00%	80.00%	0.00%	0.00%	0.00%	0.00%
		good	Number	3	0	1	0	0	0	3	
			Proportion	60.00%	0.00%	20.00%	0.00%	0.00%	0.00%	60.00%	
		fair	Number	0	0	0	0	0	0	0	
			Proportion	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
		Unsatisfied	Number	0	0	0	0	0	0	0	
			Proportion	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
		Very unsatisfied	Number	0	0	0	0	0	0	0	
			Proportion	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
		Total	11	Very good	Number	3	4	0	0	0	1
					Proportion	27.27%	36.36%	0.00%	0.00%	0.00%	0.00%
good	Number			6	2	1	0	0	0	6	
	Proportion			54.55%	18.18%	9.09%	0.00%	0.00%	0.00%	54.55%	

fair	Number	0	1	0	0	0	0	0
	Proportion	0.00%	9.09%	0.00%	0.00%	0.00%	0.00%	0.00%
Unsatisfied	Number	0	0	0	0	0	0	0
	Proportion	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Very unsatisfied	Number	0	0	0	0	0	0	0
	Proportion	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Table 45 indicates that in terms of forest ownership transfer service, 63.63% of the middlemen expressed great satisfaction or satisfaction over the service attitude of the trading centers, 72.73% over the efficiency, 63.63% over the fairness, 63.64% over the reasonability of charging, 45.45% over the effectiveness, 63.63% over the transfer prices.

Table.45 Degree of satisfaction of forest tenure trade service of FTTC to the middlemen

County	Number of traders	Degree of satisfaction	Service attitude	efficiency	Fair	Reasonable fees	Timeliness	Trade prices			
Jingping	4	Very good	Number	0	0	0	0	0	0		
			Proportion	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
		good	Number	1	2	1	2	2	2	2	
			Proportion	25.00%	50.00%	25.00%	50.00%	50.00%	50.00%	50.00%	
		fair	Number	1	0	1	0	0	0	0	
			Proportion	25.00%	0.00%	25.00%	0.00%	0.00%	0.00%	0.00%	
		Unsatisfied	Number	0	0	0	0	0	0	0	
			Proportion	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
		Very unsatisfied	Number	0	0	0	0	0	0	0	
			Proportion	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
		Huangping	2	Very good	Number	0	1	1	0	1	1
					Proportion	0.00%	50.00%	50.00%	0.00%	50.00%	50.00%
good	Number			1	1	1	2	1	1		
	Proportion			50.00%	50.00%	50.00%	100.00%	50.00%	50.00%		
fair	Number			0	0	0	0	0	0		
	Proportion			0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
Unsatisfied	Number			0	0	0	0	0	0		
	Proportion			0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
Very	Number			0	0	0	0	0	0		
	Proportion			0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		

		unsatisfied	Proportion	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		Very good	Number	2	1	1	1	1	1
			Proportion	40.00%	20.00%	20.00%	20.00%	20.00%	20.00%
		good	Number	3	3	3	2	0	2
			Proportion	60.00%	60.00%	60.00%	40.00%	0.00%	40.00%
Liping	5	fair	Number	0	1	1	1	2	1
			Proportion	0.00%	20.00%	20.00%	20.00%	40.00%	20.00%
		Unsatisfied	Number	0	0	0	1	1	0
			Proportion	0.00%	0.00%	0.00%	20.00%	20.00%	0.00%
		Very	Number	0	0	0	0	0	
		unsatisfied	Proportion	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		Very good	Number	2	2	2	1	2	2
			Proportion	18.18%	18.18%	18.18%	9.09%	18.18%	18.18%
		good	Number	5	6	5	6	3	5
			Proportion	45.45%	54.55%	45.45%	54.55%	27.27%	45.45%
Total	11	fair	Number	1	1	2	1	2	1
			Proportion	9.09%	9.09%	18.18%	9.09%	18.18%	9.09%
		Unsatisfied	Number	0	0	0	1	1	0
			Proportion	0.00%	0.00%	0.00%	9.09%	9.09%	0.00%
		Very	Number	0	0	0	0	0	
		unsatisfied	Proportion	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Table 46 shows that in terms of information advisory service, 9.09% of middlemen expressed very unsatisfactory opinions about the effectiveness of forest ownership trading centers, and rated their service attitude, efficiency, fairness and reasonability of charging as great satisfaction, satisfaction and general satisfaction.

Table.46 Degree of satisfaction of information service of FTTC for the middlemen

County	Number of trade	Degree of satisfaction	Service attitude	efficiency	Fair	Reasonable fees	timeliness	Other services	
Jingping	4	Very good	Number	0	0	0	0	0	
			Proportion	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		good	Number	1	1	1	0	0	0
			Proportion	25.00%	25.00%	25.00%	0.00%	0.00%	0.00%
		fair	Number	0	0	0	0	0	0

		Proportion	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		Number	0	0	0	0	0	0
		Proportion	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		Very	Number	0	0	0	0	1
		unsatisfied	Proportion	0.00%	0.00%	0.00%	0.00%	25.00%
		Very good	Number	0	1	1	2	1
		Proportion	0.00%	50.00%	50.00%	100.00%	50.00%	0.00%
		good	Number	1	1	1	0	0
		Proportion	50.00%	50.00%	50.00%	0.00%	0.00%	0.00%
		fair	Number	1	0	0	0	0
		Proportion	50.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		Unsatisfied	Number	0	0	0	0	0
		Proportion	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		Very	Number	0	0	0	0	0
		unsatisfied	Proportion	0.00%	0.00%	0.00%	0.00%	0.00%
		Very good	Number	1	1	1	1	1
		Proportion	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%
		good	Number	3	2	2	2	2
		Proportion	60.00%	40.00%	40.00%	40.00%	40.00%	0.00%
		fair	Number	0	0	1	1	1
		Proportion	0.00%	0.00%	20.00%	20.00%	20.00%	0.00%
		Unsatisfied	Number	0	0	0	0	0
		Proportion	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		Very	Number	0	0	0	0	0
		unsatisfied	Proportion	0.00%	0.00%	0.00%	0.00%	0.00%
		Very good	Number	1	2	2	3	2
		Proportion	9.09%	18.18%	18.18%	27.27%	18.18%	9.09%
		good	Number	5	4	4	2	2
		Proportion	45.45%	36.36%	36.36%	18.18%	18.18%	0.00%
		fair	Number	1	0	1	1	1
		Proportion	9.09%	0.00%	9.09%	9.09%	9.09%	0.00%
		Unsatisfied	Number	0	0	0	0	0
		Proportion	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		Very	Number	0	0	0	0	1
		unsatisfied	Proportion	0.00%	0.00%	0.00%	0.00%	9.09%

6.2.5 Forest Farms

(1) Awareness of the functions of forest ownership trading centers

When asked “do you know of forest ownership trading centers”, among the 20 employees of forest farms, 100% said they knew forest ownership trading markets (table 47). 80% know them through county and township functional departments. In the functions of forest ownership trading centers, what employees know best is that they offer information advisory (table 48), and the function that they most expect forest ownership trading centers to provide is also information advisory (table 49).

Table.47 FTTC Cognition by employees of forest farms

County	Number of surveyed		Yes	No
Jingping	10	Number	10	0
		Proportion	100.0%	0.0%
Huangping	1	Number	1	0
		Proportion	100.0%	0.0%
Liping	9	Number	9	0
		Proportion	100.0%	0.0%
Total	20	Number	20	0
		Proportion	100.0%	0.0%

Table48 The functions of FTTC the respondents knew

County	Number of surveyed		Information of traders	Price information	Help to trade forest tenure	Help to mortgage	Forest insurance	Assets appraisal	Logging permit service	No idea
Jingping	10	Number	9	8	3	1	0	3	1	0
		Proportion	90.00%	80.00%	30.00%	10.00%	0.00%	30.00%	10.00%	0.00%
Huangping	1	Number	0	0	0	0	0	0	0	1
		Proportion	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Liping	9	Number	5	6	6	0	0	0	0	2
		Proportion	55.56%	66.67%	66.67%	0.00%	0.00%	0.00%	0.00%	0.00%
Total	20	Number	14	14	9	1	0	3	1	3
		Proportion	70.00%	70.00%	45.00%	5.00%	0.00%	15.00%	5.00%	15.00%

Note: Multi-choices

Table.49 Desired functions of FTTC of forest farm staff

County	Number of surveyed	information	Help to						
			Help to mortgage	trade forest tenure	Assets appraisal	Forest insurance	No idea	Other service	
Jingping	10	Number	8	1	4	5	1	0	1
		Proportion	80.00%	10.00%	40.00%	50.00%	10.00%	0.00%	10.00%
Huangping	1	Number	0	0	0	0	0	0	0
		Proportion	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Liping	9	Number	7	4	4	3	2	1	0
		Proportion	77.78%	44.44%	44.44%	33.33%	22.22%	11.11%	0.00%
Total	20	Number	15	5	8	8	3	1	1
		Proportion	75.00%	25.00%	40.00%	40.00%	15.00%	5.00%	5.00%

Note: Multi-choices

(2) Selection of trading places

In forest ownership transfer, 85% of employees would like to choose transfer inside forest farms, and the major reason for it is that much higher transfer prices can be gained on forest farms (table 50). But there are still 15% of employees who would like to choose transfer outside forest farms, and the major reasons for it are that the transfer trading programs inside forest farms are complicated and inconvenient, trading prices are unreasonable and assessments are incredible, and it is easy to fail in auction.

Table.50 Reasons for enterprises choosing trade in FTTC in the view of forest farm staff

County	Number of surveyed	Followed other forest farms	Easy to access	Good price	Credible assessment	Fair, impartial, open	No fees	Large scale of trade	
									Jingping
		Proportion	28.57%	28.57%	28.57%	14.29%	0.00%	42.86%	14.29%
Huangping	1	Number	0	0	1	0	0	0	0

		Proportion	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%
Liping	9	Number	0	1	3	0	1	0	0
		Proportion	0.00%	11.11%	33.33%	0.00%	11.11%	0.00%	0.00%
Total	17	Number	2	3	6	1	1	3	1
		Proportion	11.76%	17.65%	35.29%	5.88%	5.88%	17.65%	5.88%

Note: Multi-choices

(3) Role of the centers in information sources

Table 51 shows that 95% of employees believe the trading information of forest farms comes from forest ownership trading centers.

Table.51 Trade information sources for forest farms

county	Number of surveyed		FTTC	Farmers	Broadcast	TV	Internet	News-paper	Relatives and friends	Forest department	traders	Call for bids	Market investigation	Middle man
jingping	10	Number	10	2	0	0	1	0	4	4	0	1	0	3
		Proportion	100.0%	20.0%	0.0%	0.0%	10.0%	0.0%	40.0%	40.0%	0.0%	10.0%	0.0%	30.0%
Huang-ping	1	Number	1	0	0	0	0	0	0	0	0	0	0	0
		Proportion	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Liping	9	Number	8	1	0	0	0	0	1	5	4	0	1	0
		Proportion	88.9%	11.1%	0.0%	0.0%	0.0%	0.0%	11.1%	55.6%	44.4%	0.0%	11.1%	0.0%
Total	20	Number	19	3	0	0	1	0	5	9	4	1	1	3
		Proportion	95.0%	15.0%	0.0%	0.0%	5.0%	0.0%	25.0%	45.0%	20.0%	5.0%	5.0%	15.0%

Note: Multi-choices

(4) Appraisals for forest ownership trading centers

The staff of forest farms think the biggest advantage of forest ownership trading centers is the reasonability of transfer prices, etc. (table 52), and the biggest disadvantage is the troublesome and long time of transferring-in procedures (see table 53).

Table.52 Strengths of FTTC in opinion of staff of forest farm

County	Number of surveyed		Quickly and easily to access	Lower trade fees	Large scale of trade	Reasonable price
Jingping	10	Number	1	1	4	4
		Proportion	10.00%	10.00%	40.00%	40.00%
Huangping	1	Number	1	0	0	0
		Proportion	100.00%	0.00%	0.00%	0.00%
Liping	9	Number	2	0	1	5
		Proportion	22.22%	0.00%	11.11%	55.56%
Total	20	Number	4	1	5	9
		Proportion	20.00%	5.00%	25.00%	45.00%

Note: Multi-choices

Table.53 Weaknesses of FTTC in opinion of staff of forest farm

County	Number of surveyed		Complicated procedure and long time	High fee for trade	Forest land not fit for trade	Higher price	Subject to logging quota	Buyers' monopoly	No weakness
Jingping	10	Number	3	1	2	1	2	1	1
		Proportion	30.00%	10.00%	20.00%	10.00%	20.00%	10.00%	10.00%
Huangping	1	Number	1	0	0	0	0	0	0
		Proportion	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Liping	9	Number	1	1	1	2	1	1	1
		Proportion	11.11%	11.11%	11.11%	22.22%	11.11%	11.11%	11.11%
Total	20	Number	5	2	3	3	3	2	2
		Proportion	25.00%	10.00%	15.00%	15.00%	15.00%	10.00%	10.00%

Note: Multi-choices

6.3 Township Governments and County Forestry Bureaus

When the related principals and investigation teams of township governments and county forestry bureaus were conducting an interview (discussion), they reflected the main problems in forest ownership transfer, and put forward proposals on how to conduct the role of forestry cooperative economic organizations' in forest farmers'

forest ownership transfer.

6.3.1 Few Timber-Processing Enterprises Participating in Auctions

Timber-processing enterprises must have the qualification of business certificates from the province if they want to participate in auction. Based on the principle of “supporting the good, the strong and the big enterprises”, the assessment group, composed of the forestry, finance, national endowment, industry and commerce, economic and trade, technology supervision, pricing sector, etc. assess the capital equipment of the existing processing enterprises, gradually integrate, obsolete and ban the small processing enterprises with small scale, low utilization rate of wood processing, low contributive rate of finance, great waste of resources, and for the enterprises not completing integration within the stipulated time of technological transformation and integration, cancel their timber operating and processing qualification. Currently, there are only 28 enterprises in the 4 case study counties that have timber-processing qualification, and the numbers of such enterprises in Jianhe, Jinping, Huangping and Liping County are respectively 8, 4, 4 and 12.

6.3.2 Difficulty of forest ownership Mortgage

Forest ownership mortgage lags behind. Because of the lag of assessment, the risks for financial departments, such as fire, diseases and pests, is great, and 30% of the price of collateral can be loaned generally. Tree loans must be examined and verified through diversified programs, and this is troublesome.

6.3.3 Strong policy restrictions on harvest quota

The harvesting quota system results in forest farmers’ disposal rights being unenforceable. According to the harvesting quota and allocation approval system finalized by the current forestry policy and regulation, forest farmers have no disposal rights for the trees operated by themselves, the cutting, sales right of woods, etc. are all still under control, making it hard to vitalize timber transactions.

6.3.4 Enable Forestry Cooperative Economic Organizations to Play Their Roles

By reforming village forest farms and promoting the development and expansion of forestry cooperative economic organizations, the forestry cooperative economic organizations will be built as the “spokesman” of forest farmers for forest ownership transfer. The village forest farms where forest farmers subscribe their shares in lands have moral problems. Contracts stipulate that there are no dividends for tree thinning and dividends only for final cutting in the management period of forest farms, which results in big-diameter woods cut in thinning of forest farms and small-diameter woods cut when final felling, eroding the interests of forest farmers. Simultaneously, village forest farms also have the problems such as low operating efficiency, poor

mechanism of benefit connection between forest farms and forest farmers, difficulty in forming mechanisms of benefit and risk sharing, etc. Therefore, relying on village forest farms as established organizations, the collaborative transformation of forest farms must be actively enhanced. Limited by the reality of less developed forestry cooperative economic organizations, the government should comprehensively use such supportive measures as policies, financial funds and tax incentives to realize the development and expansion of forestry cooperative economic organizations, exactly build the forestry cooperative economic organizations as the suppliers of such production elements as forestry production funds, technology and information, and as the “spokesman” for forest ownership transfer of forest farms, and fulfill the demands socialized services of forestry production and ensure the benefits of forest ownership transfers.

6.4 Provincial Forestry Bureau

When relevant leaders of the provincial forestry bureau were a discussing with the investigation team, they introduced the progressing of the forest ownership transfer in the whole province, analyzed the influence factors to restrict the effective performance of forest ownership transfer, and also proposed some suggestions for improvement at the same time.

The provincial forestry bureau has made investigation on transfer and formulated regulations, and the preliminary work has been finished, waiting for the adoption by the National People’s Congress Standing Committee after discussion. Transfers of forest ownerships were required to terminate during the reform, and only when legislation is adopted, the conducts of transfers Guizhou Provincial Forestry Bureau and the Rural Credit Cooperatives jointly formulated a guideline to mortgage loan on forest resources, and piloted it in Ceheng County in Southwest Guizhou, with a loan of more than RMB 50 million. But there are still problems: short duration, high interest rate, exclusive management, compulsory insurance attached to loans, etc. Later a published policy document was issued in conjunction with 5 ministries and commissions, such as the Agricultural Bank and the People’s Insurance Group, etc. intensifying financing measures. Although the provincial forestry bureau has done some work for protection and development, there are still a few problems.

6.4.1 Related Supporting Policies are incomplete

Currently, there are no regulations related to forest ownership transfer at national level. Non completion of supporting policies, inappropriate policies and regulations for development, etc. are the primary causes of constraining forest ownership transfer. Some experts recommend modifying Forest Law, but some departments think Forest Law doesn’t lag greatly and should slow down the progressing of modification.

However, people from the provincial forestry bureau consider that both harvesting and management should be changed; otherwise too many restrictions would restrain the transfers.

6.4.2 Lack of National Fundamental Forestry Information Platform

Information platform of forest ownership reform has been established at grassroots level, but not at the national level. Such a national information platform would allow all agencies to share the forestry information. The national information platform is an infrastructure work, lots of resources will be wasted if it is not well developed, and the working efficiency of forestry systems will be reduced. Without this platform, there is no way for the management departments related to forest ownership transfer to check relevant data. For example, if a bank offering mortgages would no longer need go to the field to check authenticity of the certificate of forest right, contents, etc. with such a forestry information platform.

6.4.3 Forestry Professional Cooperative Organizations' Role is not realized

After reform of the collective forest ownerships, forest lands will be managed mainly based on household of forest farmers. Besides, because of the large population of China, the area of forest land per household on average is small and dispersive. The power of professional cooperative organizations needs to be developed so as to progress towards scaling up, intensification and professionalization. To correctly guide forest farmers' legal establishment of professional cooperative organizations and to produce the effects of professional cooperative organizations in forestry management and forestry elements transfer will be helpful for sustainable forestry development and the orderly operation of elements markets, and can reduce the trading costs of forest farmers. Taking Huangping County as an example, there were few forestry professional cooperative organizations, and due to limited funding and personnel resources, the professional cooperative organizations have not yet actually played their roles.

6.4.4 The Number of trading participants is small

Guizhou province formulated an 11th 5-year industrial plan, in which enterprises were divided into 2 groups, the priority and general enterprises, and were encouraged to collaborate with each other. But enterprises in some local areas are still working independently with no collaboration. Though the enterprises have been screened and rectified, their integration was not forced. Qiandongnan (Southwest Guizhou) prefecture has consolidated enterprises, hoping to enlarge and strengthen them; as a result, the approval right was put under the control of prefecture. Counties have no right to examine and approve processing enterprises, and the provincial government did not impose any enforced restrictions on that. However, there is some integration

of enterprises which are restricted by the national policies. After integration, the number of enterprises was reduced, resulting in a reduced number of participators, especially the buyers in the forest ownership trading centers. Therefore, in order to increase the number of buyers, in addition those enterprises at a certain scale can participate in merchantable timber auction of the trading centers. Institutions and individuals that legally obtained qualification of timber management should be allowed to participate in auctions in the trading centers.

6.4.5 Funds, Personnel and Office Equipment cannot be guaranteed

It is a serious problem that the forestry grassroots level law enforcement officials are lacking of working capital, especially, even the funds for personnel and office equipment for the forest ownership trading centers, cannot be guaranteed. Liping, Jinping, Jianhe counties are all major forestry counties, 60% of whose financial revenues are made up by forestry incomes. The great financial burden and supporting staff with forestation funds has caused unfair law enforcement and damaged interests of forest farmers, the appeal to integrate the grass-roots expenditures into the financial budget has becomes increasingly important. In 2009, the provincial bureaus of forestry, finance, personnel, and labor and social security undertook a special subject survey on grassroots level employees, finding out there was a financial gap of over RMB 50 million. A policy integrating grassroots-level governmental law enforcement into the financial budget will be developed in this year, payments will be transferred and cashed by county finance, but it will take a period of time for actual implementation.

6.4.6 Forest Assets Assessment System has not been established

Forest assets assessment is the major supporting system for forest ownership transfer. At present, all the counties are in short supply of personnel for forest assets assessment and agencies in this field haven't been improved, which will definitely restrict forest ownership transfer. Although policy documents for forest assets assessment have been issued, lack of communication with the relevant government departments will affect the implementation of these documents.

7. SWOT Analysis

7.1 Advantages of forest ownership trading centers

7.1.1 Governmental and Policy Support

A forest ownership trading center, or the establishment of forest ownership trading centers, is one of the important supporting measures for the reform of forest ownerships, is the place for forest farmers to cash forest assets, and is an important

step in solidifying the achievements of collective forest ownerships. It is inevitable to build forest ownership trading centers in different counties. The governments of case study counties have clearly recognized this, and provided active support and collaboration to the establishment of forest ownership trading centers. A series of rules for forest ownership transfer has been formulated. Despite some of them are still under discussion, the establishment of these rules has offered policy support to the development of elements markets, providing guarantee for the operation of forest ownership trading centers in an orderly way.

7.1.2 Financial Guarantee

For the reasons such as finance, the funds for establishing elements markets have not been completely put in place, but the government has published policy documents, requiring relevant departments of county government to take the establishment of forest ownership trading centers as an important task to implement a series of central government's preferential policies for farmers' betterment and promote the economic and social development of forest and mountain areas, to actively raise funds to ensure enough fund availability for establishing county forest ownership trading centers.

7.1.3 Organizational Guarantee

The establishment of county forest ownership trading centers has been put as an important agenda item of relevant departments of the case study counties, new conditions and new problems that occur in the construction of forest ownership trading centers will be resolved in a timely manner. According to this frame, sound organization and clear division of work in forest ownership trading centers are the organizational guarantees for forest ownership trading centers.

7.1.4 Technological Guarantee

In accordance with the regulations, price agencies and price, individual persons engaged in forest resources assets evaluation must be qualified by the State Development and Reform Commission and provincial pricing authorities. Currently, all case study counties have organized training activities on assets evaluation and certificates of forest assets evaluation were given to the participants. In addition, the technological power of the forestry bureaus also provides technical guarantee for forest ownership transfer conducted in the forest ownership trading centers.

7.1.5 Functional Guarantee

(1) Display of forest products

In the four case study counties, the forestry income of Jinping County has the

highest ratio in its first industry, up to 17.33%. However, the forestry incomes of the case study counties have a smaller ratio in their first industries, even less than 1% in Huangping County (table 54). To increase the industrial incomes, it undoubtedly needs to strengthen their abilities to create economic benefits from forestry. The product display windows in forest ownership trading centers can promote entrance of some unique products to the market. These products, highly profitable, with quick investment returns, no involvement in logging and no harm to the environment, can increase forest farmers' incomes. In addition, there are some relic timbers among the woods, which can be made into crafts to increase the utilization rate and value of woods.

Table.54 Proportion of primary industry in household income of 2008

County	Composition of income	Income (RMB)	Total income (RMB)	Proportion (%)
Jianhe	Agricultural income	651.96	1074.01	60.7
	Forestry income	109.85		10.23
	Grassland farming	262.72		24.47
	Fishery income	49.48		4.6
Jingping	Agricultural income	855.7001	1966.686	43.51
	Forestry income	340.9046		17.33
	Grassland farming	663.9781		33.76
	Fishery income	106.1029		5.4
Huangping	Agricultural income	1191.35	1980.83	60.14
	Forestry income	12.28		0.63
	Grassland farming	775.79		39.16
	Fishery income	1.42		0.07
Liping	Agricultural income	816.32	1527.01	53.46
	Forestry income	82.28		5.39
	Grassland farming	587.14		38.45
	Fishery income	41.27		2.7

(2) Forest ownership mortgage

Forest farmers may encounter lots of problems in their production and daily life, among which the funding problem is especially serious. After mortgaging on their forest rights, forest farmers can obtain money for the development of production, further expanding production and increasing income.

7.2 Weakness of the forest ownership trading centers

7.2.1 Trading procedures are relatively complicated

The procedural complication is a constraint on development of the forest ownership trading centers. A complete transaction has to go through many steps such as making application, filling forms, paying deposit, conducting auction, signing contract, obtaining certificates for harvesting, transporting, volume checking and quarantine. For the forest farmers with low educational qualifications, it is a complicated process.

7.2.2 Trading costs are relatively high

Trading costs are higher than those of outside transactions, which is also a constraint to the development of forest ownership trading centers. Forest farmers, who are isolated, must get to the county town for the transaction of relevant procedures, and the travelling, meals and lodging will cost them a lot.

7.2.3 Institutions are incomplete

The institutional incompleteness is also one of the disadvantages of forest ownership trading centers in case study counties. The institutional incompleteness, for one thing, is because personnel and equipment cannot be put in place, the related institutions that have been established cannot operate normally; furthermore, because supporting policies fall behind, they are unable to work. For instance, the linkage between the mortgage loan center and the bank is not put in place, the specific instructive advice at county level is not published officially, making it impossible to transact mortgage loans. In addition, the lack of technical personnel is also a reason for institutional incompleteness. For example, forest property assessors need to be certificated, and evaluation organizations also need to be qualified.

7.2.4 Personnel and Funds are not in place

The platform of forest ownership trading centers has been built, but the approval of personnel recruitment, implementation of staffing, availability of operating expenses are still in the negotiation with the governmental departments. Although the county governments have paid much attention to the construction of forest ownership trading centers in modality and ideology, the case study counties are the national poverty-stricken counties and have a great pressure on finance. Therefore, it still needs a period of time to get personnel, funds and equipment in place. Now the funds of forest ownership trading centers in the case study counties are all from the county forestry bureaus, but the forestry bureaus also do not have sufficient funds. Therefore,

forest ownership trading centers have a big financial deficit.

7.3 Analysis of the Developmental Opportunities of Forest ownership trading centers

7.3.1 Forestry has rich resources, high forest volume and great potential for trading

Qiandongnan (Southeast Guizhou) Prefecture is rich in forestry resources (table 55). The forestry department of Guizhou province stipulated that forest lands are not allowed to be transferred in the period of ownership reform. Therefore, the transactions of forest ownership trading centers mainly involve the auction of commercial timbers. However, with the deepening of the reform of collective forest ownerships and increased awareness of forest ownership by forest farmers, the demands for forest ownership transfer will continue to increase.

Table.55 Forestry resources in case counties

County	Area of forestry land (10000hm ²)	Area of forest (10000hm ²)	vivid stumpage (10000m ³)	Proportion of forest land in land area(%)	Forest cover rate(%)
Jianhe	16.8125	13.6529	822.3839	77.83	68.2
Jinping	12.6408	11.4985	769	79.16	72.01
Huangping	10.023	6.9867	413.54	56.48	41.87
Liping	34.5392	31.0822	1930.4	77.81	72.17
Total	74.0155	63.2203	3935.3239	72.82	63.56

7.3.2 Forest Farmers and enterprises have strong willingness of ownership transfer

Table 56 and 24 indicate that among the surveyed forest farmers and forestry enterprises in Southeast Guizhou, 61.93% of forest farmers and 100% of enterprises' staff have the willingness to transfer. And the staff of forestry enterprises who choose inside transactions accounted for 31.82% of the total who would like to transfer forest ownerships, and those that choose both inside and outside transactions accounted for 31.28% (table 24), which can serve as potential resources for the establishment of forest ownership trading centers.

Table.56 Willingness of forestry farmers to trade forest right

County	Number of	Yes	No	No answer
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surveyed					
Jianhe	47	Number	18	26	3
		Proportion	38.30%	55.32%	6.38%
Jingping	57	Number	31	22	4
		Proportion	54.39%	38.60%	7.02%
Huangping	53	Number	37	16	0
		Proportion	69.81%	30.19%	0.00%
Liping	61	Number	49	12	0
		Proportion	80.33%	19.67%	0.00%
Total	218	Number	135	76	7
		Proportion	61.93%	34.86%	3.21%

7.3.3 The number of Forest-land transfer will increase after completion of the ownership reform

Table 57 shows that among the surveyed staff of enterprises, 90.9% think the content of enterprises' transactions is forest ownership. With the completion of forest ownership reform, plenty of forest lands will be put into transfer, the trading volume of forest ownership trading centers is expected to increase.

Table.57 Forest right trade in forestry enterprises

County	Surveyed employees	Employees who participated trade	Trade right		
			Ownship of forest land	Ownship of woods	
Jianhe	6	Number	6	0	6
		Proportion to forest tenure trade participants		0.0%	100.0%
		Proportion of surveyed	100.0%	0.0%	100.0%
Jingping	4	Number	4	1	4
		Proportion to forest tenure trade participants		25.0%	100.0%
		Proportion of surveyed	100.0%	25.0%	100.0%

Huangping	7	Number	7	4	6
		Proportion to forest tenure trade participants		57.1%	85.7%
		Proportion of surveyed	100.0%	57.1%	85.7%
Liping	5	Number	5	1	4
		Proportion to forest tenure trade participants		20.0%	80.0%
		Proportion of surveyed	100.0%	20.0%	80.0%
Total	22	Number	22	6	20
		Proportion to forest tenure trade participants		27.3%	90.9%
		Proportion of surveyed	100.0%	27.3%	90.9%

Note: Multi-choices

7.3.4 Social investments flow into forestry

Forestry is a potential industry, especially in rural areas, and forestry is the main approach for forest farmers to increase their incomes. Ecological environment protection and sustainable development have become the main issue of the National People's Congress and the China People's Political Consultative Congress (CPPCC), and the content of "No. 1 Proposal" of the CPPCC was to discuss low-carbon environmental protection. Forestry is a win-win industry for environmental protection and development, and it will definitely have a big role to play in the era of low-carbon economy. The social investments flowing into forestry is growing increasingly, and forest ownership trading centers will play a greater part in the future.

7.3.5 Continual improvement is made in the Legal System

The legal system is a guarantee for healthy growth of the forest ownership trading centers. If there is no improved legal system, the element market may become a barrier to forestry development and the increase of forest farmers' incomes, and become a formality. Therefore, with accelerated legalization, public awareness of laws has been raised, and this will promote forest ownership trading centers to play

their role in allocation of forestry elements.

7.3.6 More ways of information access

With the advances in science and technology and popularity of information media, such as television, network, mobile phone, the means of forest farmers' information acquisition are getting more and more affluent. This provides the forest ownership trading centers with the advantages as follows: a) increasing number of promotional channels; b). reduction of information delivery costs; c) increased number of ways of forest ownership transfer, and if auction can be achieved online, the trading costs of forest farmers and enterprises will also be reduced; d) increased efficiency of trading centers.

7.4 Threats to the development of forest ownership trading centers

7.4.1 The public welfare forests is too large in area

In the composition of the area of forest lands in the case study counties, ecological forests take a big part, all about 30% or above, and it is even up to 40% in Jianhe county (table 58). As public welfare forests have not been transferred in forest ownership trading centers currently, the trading volume of the centers is restricted to a certain extent.

Table.58 forestry land use types in case counties

County	10000 hm ² , %				
	Forestry land	Ecological forest	Proportion (%)	Production forest	Proportion (%)
Jianhe	16.8125	6.7418	40.10	10.0707	59.90
Jinping	12.6408	3.6949	29.23	8.9459	70.77
Huangping	10.023	3.3717	33.64	6.6513	66.36
Liping	34.5392	10.9144	31.60	23.6248	68.40
Total	74.0155	24.7228	33.40	49.2927	66.60

7.4.2 Trust Level of Farmers and Enterprises is hard to raise

At present, a big threat that the forest ownership trading centers are facing with is the trust level of farmers and enterprises. This market must be wholly competitive if the forest ownership trading centers want to accomplish their goals of optimizing distribution of resources. Of course, if a participant of this market does not trust it, he would not try to enter it. Therefore, how to make farmers and enterprises enter this market for transaction, is the first question that the forest ownership trading centers

should resolve. However, according to the current investigation, the trust level of farmers and enterprises is hard to raise within a short time.

7.4.3 Restrictions by logging License System

The logging license system has contributed a lot to the continuous increase of the area of forests in China, but the strict logging license system gives no encouragement to many social funds to invest in forestry, frustrating the enthusiasm of investors. Especially in the places where harvesting quota allocation is lacking justice, fairness and transparency, forest farmers, prospective investors and forestry enterprises are poorly motivated, which restricts not only the development of forest ownership trading centers, but also the development of forestry. Table 59 gives the Logging quota of the case study counties in the period of “Eleventh Five-year”.

Table.59 Logging quota of the case counties in the period of “Eleventh Five-year”

10000m³

County	Total	Logging Type				
		Final cutting	Intermediate cutting	Regenrate cutting	Low production forest improvement	Others
Jianhe	25.5000	11.1540	6.0900	3.7100	1.8620	2.6840
Jinping	12.2100	8.4400	1.9700	0.9200	0.7800	0.1000
Huangping	8.8280	5.6590	2.5000	--	0.5630	0.1060
Liping	56.5360	11.8600	37.2430	5.0730	1.7090	0.6510

7.4.4 Higher Risk of Investment in Forestry

Because of the long investment cycle in forestry, the risk of investment is high. This is the most important constraint against forestry development. Especially in a long period of time, policy continuity and stability cannot be ensured, imposing the risk of investment in forestry. Therefore, the scale of social funds flowing into the forestry industry will be restricted, and this is also another threat to the development of forest ownership trading centers.

7.4.5 Compensation of Forest Ecological Benefits is still not fully in Place

Guizhou Province’s Interim Measures for the Management of Local Financial Compensation Funds for Forest Ecological Benefits stipulates that the standards of local financial compensation for forest ecological benefits is determined temporarily as RMB 275 per hectare every year, which are arranged by the province, city (state, prefecture), county (city, region) at the ratio of 4:3:3 and must be cashed in full amount for the forest owners according to the area recorded in the nationally unified

certificates of forest rights. But the policy of local ecological benefit compensation has currently not been completely put in place, leading to poor awareness of forest farmers in forest production and protection.

7.4.6 Forest Ownership Trading is restricted by Property Rights and the administrative System

The ownership of rural forest land belongs to collectives, and forest farmers can only use the forest lands and own the forests. This kind of property rights is incomplete, and disposition and earning rights of the forest ownership are restricted by many conditions. In many places, forests and forest lands were contracted to individuals after the forest ownership reform, and if the land was identified for public welfare forests (local or key public welfare forests), then the woods are not allowed for clear cutting and only for regeneration felling. Some places simply stipulate that neither cutting nor using for mortgage loan is allowed. However, the ecological compensation funds in China now are very low, there are even no ecological compensation funds for local public welfare forests, and even if there are, they are hard to be put in place, which affects the earning and disposition rights of forest farmers.

Furthermore, the survey on forest ownership reform indicated that serious ownership disputes occurred during the reform. By October 21, 2008, thorough inventory, clarification of ownerships and demarcation, a total of 13,706 forest ownership disputes had been found in the whole prefecture, involving an area of 62,228 ha, and 8,299 disputes have been solved through mediation, involving an area of 10,500 ha, accounting for respectively 60.6% and 24.1% of the total number and area under disputes. As a result, there are still lots of disputes failed in mediation, involving a large area, accounting for 39.4% and 75.9% respectively of the total number and area under disputes, remaining to be a tough task.

8. Proposals on the Improvement of Policy, Law, Finance and Institutions for the Operation of Forest ownership trading centers

The improvement of the operation of forest ownership trading centers is a systematic project, including the enabling environment and follow-ups in policies, laws, finance and institutions, etc. mainly involving (as shown in figure 8) forest ownership suppliers (forest farmers and farms), forest ownership trading centers, forest ownership demanders (timber merchants and enterprises), forest farmer cooperative economy organizations and institutions for the management of forest ownership transfers (the provincial forestry department, prefecture and county forestry bureaus). The overall concept of the improvement is to increase the

investment and decrease the cost for forestry development. Firstly, improving the guarantee system of financial transfer payment, strengthening financial support and building a new model of fund circulation and a new balancing system of income and expenditure for forestry departments; secondly, reducing forestry taxes, improving harvesting management, expanding forest ownership transfers, strengthening infrastructures in forest regions, increasing profitability of forest ownership transfers for forestry management entities, increasing the occurrence of forest ownership transfer, providing sufficient market space for the transfers of the forest ownership transfer centers, increasing effective supplies for the forest ownership transfers of the centers; next, improving forest ownership transfer systems, regulating private transfers, simplifying the forest ownership transfer procedures of the centers, reducing the forest ownership transfer taxes of the centers, providing guidance to develop intermediaries in forest ownership transfer market, highlighting market orientation of the forest ownership transfer centers, strengthening the competitive mechanism of forest ownership transferees of the centers, increasing the effective demands of forest ownership transfer of the centers; finally, strengthening the development of service functions of the centers, establishing information bases and information sharing platform for forest resource transfers, realizing the one-stop, information-based and networked services of forest ownership transfer centers, and promoting healthy growth of the centers.

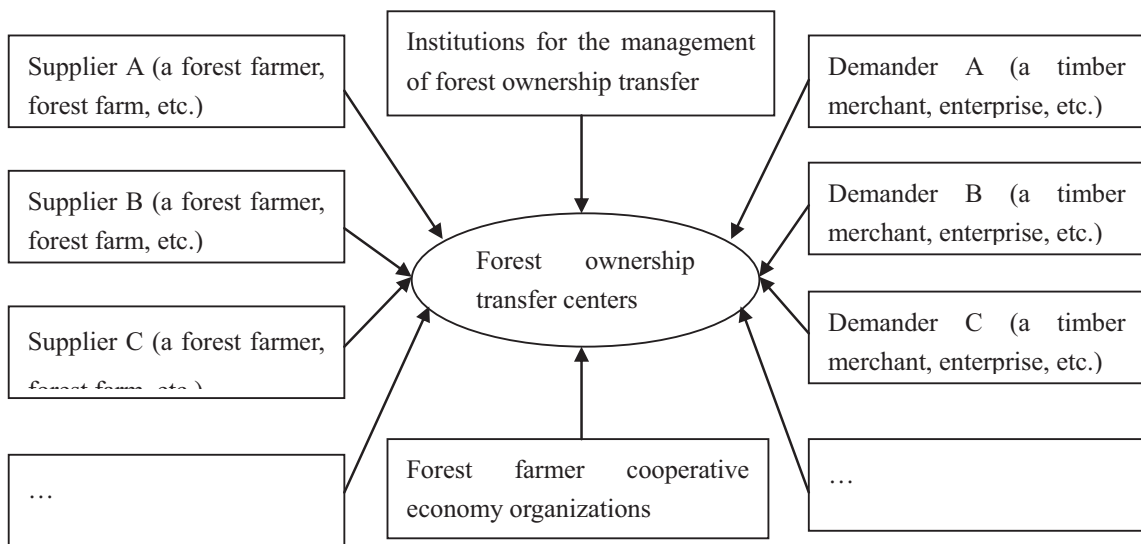


Figure 8 frame diagram of the thought to improve the performance of forest ownership transfer centers

8.1 Policy

8.1.1 Implementing a new system of controlling the total annual allowable forest cut, eliminating the quota allocation on consumption structure and cutting type

Currently, harvesting quota can be divided into commercial and public welfare timbers (which can be further divided into timbers for farmers' self use, timbers for civilian fire wood use, timbers for rearing industry and timbers for other use) according to the consumption structure; harvesting quota also can be divided into rotational felling, intermediate cutting, regeneration felling, low-yield (efficiency) improvement cutting and other types of harvesting. With the deepening of the new countryside construction and the rising of rural residents' living standard, rural residents use more aluminum alloy doors and windows in their new houses, and the consumption of timbers in building maintenance, furniture and agricultural tools is getting lower and lower. A large amount of household electrical appliances (electromagnetic oven, electric cooker, etc.) is coming into the rural households, as well as a great deal of biogas generating pits, development of firewood-saving stoves and liquefied gas stoves, causing a great reduction of firewood consumption by rural residents' everyday living,. The timber quotas allocated for farmers' self use and firewood are in surplus, whereas the quotas for commercial timber are in severe shortage. In addition to that, the standards of the ecological benefit compensation of public welfare forests are low and have not been implemented as yet. A big difference of economic benefit exists between ecological public welfare forests and commercial forests. Therefore, the implementation of quota allocation on consumption structure and cutting type leads to irrational quota allocation and failure to realize the economic benefits of forestry managers, resulting in poor performance of forest harvesting management mechanism, affecting the enthusiasms of forest farmers in forestry protection, cultivation and development, and causing frequent deforestation in rural areas. The main purposes of the new mechanism for the control of total annual allowable forest cut are to resolve a series of contradictions caused by the irrational quota allocation, focusing on enforcement of the rights of forest harvesting and disposition of forest managers, hence to achieve ecology protection and economic benefits to farmers, and promote the harmonious development of rural economy.

8.1.2 Reforming the management model of harvesting public welfare forests

Under the premise not to weaken the ecological functions of public welfare forests and reduce forest coverage, to narrow the big difference and contradiction of economic benefits between public welfare and commercial forests, increase the revenues of public welfare forest managers, enhance the economic development of forest regions, and increase the enthusiasm of forest managers in forest cultivation,

protection and development. In accordance with the spirit of the document *Proposals of the Guizhou Provincial People's Government on Carrying out and Deepening the Reform of Collective Forest ownership System*, explore the resources of public welfare forest lands thoroughly and reasonably and develop the economy of forest lands under the premise of ensuring ecological functions; public welfare forests can execute intermediate and regeneration cutting after approval. Regeneration cutting can be executed when public welfare forests (except for the forests for special use) reach the age of regeneration cutting or the minimum DBH of physiology maturity for major timber species. . Regeneration cutting mainly consists of selective cutting and requires forest canopy closure above 0.5 after selective cutting.

8.1.3 Controlling Commercial Forest Cutting according to Compartment size

Traditional cutting control on three criteria (area, volume and timber output) is shifted to cutting control on compartment size. Any cutting of trees within the scope defined by harvesting permit that meet the requirements for harvesting is regarded as certified harvesting. All logs and harvesting residues produced within the harvesting area are allowed to apply for timber transport permit. Any excessive cutting over the designed quantity needs to fill the declaration form of verification of timber (commercial forests) produced in the harvesting area as required, and apply for harvesting permit. The harvesting control of commercial plantations according to compartment size is helpful for forest farmers to execute intensive management commercial plantations, increase forest volume per unit area, improve the utilization efficiency of forest lands, and promote the development of commercial plantations bases.

8.1.4 Extension of the model of rational utilization of “two-sides commercial forests”

For the commercial forests in the range of 50 meters on both sides of provincial and rural roads, 100 meters on both sides of rivers and water reservoirs, selective cutting can be intensified, and forest managers can be encouraged to interplant native shade-tolerant and precious tree species or the greening and landscaping tree species after cutting. The tree species inter-planted are allowed to be cut (excavated) and used, and priority will be given to allocate harvesting quota when cutting (excavating) and using. This can improve the utilization efficiency and economic benefits of commercial forest lands. Under the premise of ensuring ecological security, make full use of the advantages of forest land resources and implement target oriented cultivation and intensive management to maximize economic benefits of commercial forest lands, and therefore mitigate the management contradiction between commercial and ecological forests.

8.1.5 Appropriate Relaxation of area restriction in designing harvesting operation

The rural residents who have the ownership of contracted forests need to execute intermediate and regeneration cutting for the forest lands with an area of below 3 ha, or, those with forest ownership belonging to the collectives or the State need to execute intermediate and regeneration cutting for the forest lands with an area of below 1 ha, and they only need to scale the lumbers at the logging site instead of carrying out survey and design on harvesting operations; proper relaxation of restrictions on the survey area and design of harvesting operations can simplify the complicated procedures and facilitate forest farmers to the a great extent.

8.1.6 Simplifying the examination and approval procedures of forest harvesting permit

If farmers want to harvest timber, as long as the conditions of harvesting can be met, they can make an application to the village committee for comments. For standing volume below 10 m³, they need to report to the township forest stations for verification through investigation and approval on the spot; for standing volume above 10 m³, they need to deliver the report online to the county forestry resources administration for verification and comments, and then report to the county forestry bureau for examination and approval. Unnecessary intermediate steps and examination and approval procedures can be eliminated.

8.1.7 Strengthening the Management of Wood Processing, standardizing the Behaviors of Wood Processing and Invigorating Timber Sales

Relaxing the conditions for sales, operating and processing of the harvested timbers, invigorates wood trading markets, creates more timber sales channels for forest farmers, establishes direct links between producers and sellers, reduces the intermediate steps and benefit forest farmers. Any institutions and individuals that have the certificates for wood operating and processing which are qualified with the county annual examination can go to the trading centers for public bidding to purchase and process commercial timbers. Strongly advocate and support developing self-established bases for industrial raw material forests and the wood operating and processing enterprises using the off-standard timbers and leftovers and scarps as raw materials, such as cutting residues, bucking residues, trial material, processing residues. For the commercial timbers purchased by the wood operating and processing institutions and individuals (except those for mining and off-standard timbers), limit the sales and utilizations of logs, increase the processing and utilization efficiency of woods, encourage development of the key wood operating and processing enterprises with large scale, high comprehensive utilization efficiency of woods, products of high

technology, high added value products, good market prospects and high levels of technology. If forest farmers have direct sales channels away from home, they can apply for a timber transport license for direct sale of the commercial timber harvested by themselves (forbidden to purchase the commercial timbers from other farmers) with their own ID (or household register certificates), commercial timber harvesting permit and timber scaling and deliver notes.

8.1.8 Establishing and improving the Ecological Benefit Compensation Mechanism of Public welfare Forests and increasing Forest Farmers' Enthusiasm to Build Public welfare Forests

The regulations for the Implementation of Forest Law of the People's Republic of China (2000) points out that the managers of shelter forests and the forests for special purposes have the rights to obtain forest ecological benefit compensation. In order to guarantee forest farmers' benefits gained from their management and protection of public welfare forests, China and all the provinces ought to formulate, improve and implement the ecological benefit compensation systems for the public welfare forests owned by collectives or individuals as soon as possible. Firstly, China should establish ecological compensation standards that fit peculiarities of the ecological public welfare forests in different regions in line with the local conditions, specifically, we can formulate compensation standards reasonably according to tree species, age, growing situation, stumpage, shelter effectiveness, utilization prospects, etc. changing the current situation (the average compensation standard of the state-owned national public welfare forests is RMB 75 per ha every year, and that of the national public welfare forests owned by collectives and individuals is RMB 150 per ha every year). Secondly, should establish a mechanism for the stable increase of ecological benefit compensation funds, ensuring a yearly rise of the compensation standards, and make a great effort to get the ecological compensation gained by managing of public welfare forests closer to the financial revenues gained from managing commercial forests within a rotation age. Finally, the system of financial transfer payment (the compensation standard is based on a certain proportion of the provincial standard) for the ecological benefits of public welfare forest should be established, from the developed regions in the middle and low reaches of the major rivers to the poor areas in the upper reaches, enriching the compensation funds; at provincial level, the enforcement and implementation of compensation funds should be strengthened continuously while improving the ecological compensation mechanism of public welfare forests which conforms to the reality of the province, thus ensuring compensation funds available for the public welfare forests owned by collectives and individuals in full amount and in time. Meanwhile, the scope of the management of public welfare forests can be relaxed appropriately, and farmers are

allowed to conduct management in public welfare forests to an appropriate scale, such as developing understory economy or forest tourism, improving the self compensation capability of public welfare forests.

8.1.9 Encouraging Policy Insurance on Forests and eliminating worries of Forest Farmers about Their Investment in Forestry Production

Forest insurance can resolve the risk of forestry production and management effectively, while the policy forest insurance can defuse the embarrassing situation of short supplies in forest insurance markets. Therefore, the policy forest insurance should be pushed forward actively, and establish the risk compensation mechanism of forest insurance, provide favorable tax for forest insurance, identify the insurance companies undertaking the policy forest insurance by direct appointment or bidding, and form a forest insurance system by combining the policy forest insurance system, commercial multi-risk guarantee system, collective risk guarantee system and aid program for non-insurance forest disasters.

8.1.10 Strengthening Policy and Financial Support and Promoting the Development of Marketing Intermediary Service Organizations

Through favorable taxation and financial support, promote the establishment of forest assets assessment institutions and transfer agent companies, and guide and standardize the growth of intermediary service organizations to make them the main carriers of brokering forest-right transfers. In consideration of the wood middlemen's nature of intermediary services and the reality of active market, wood middlemen should be taken as the important incubator for market-based intermediary services, and establish entry certification and examination system for intermediary service organizations to ensure the third-party role and necessary service abilities of intermediary organizations.

8.1.11 Opening the market of forest ownership transfer to wider recipients and strengthening the competitive mechanism

Improve the market trading system, such as the membership of recipients of forest ownerships, wood processing license, transport license, delegate the authority of granting the license of timber transport to other provinces, reduce the taxation rate of logs sold to other counties, lower the threshold of entering trading market for capitals from other sectors other than forestry and from enterprises of other counties, deregulate the market of forest ownerships to a wider range of recipients, activate trading and auctions by timber merchants, wood processing enterprises from other counties and capitals from other sectors than forestry, and intensify the competition among recipients of transferred forest ownerships.

8.1.12 Promoting the Forestry Industrial Development and Forming a Forestry Industrial Union

Actively promote the thorough development of forestry industrialization, and explore a risk elimination mechanism, an interest coordinating mechanism and an operating restriction mechanism for different stakeholders in the forestry industrial chain. Promote the transition of forestry industries from loosely organized semi-loosely and closely organized, i.e. the linkage between different stakeholders on the forestry industrial chain is changed from market-oriented to contract-oriented and vertically-integrated, achieve the transition of forest ownership transfers from market-oriented to internalized transactions to reduce the trading costs in the transactions of forest ownerships, forming an integrated union of different stakeholders on the forestry industrial chain to share risks and benefits, therefore increasing the overall competitive capabilities of forestry industries.

8.2 Laws and regulations

8.2.1 Reducing or remitting Forestry-related Taxes & Fees, and increasing the Profits of Forest ownership Transfers

Strengthen financial transfer payment, reduce forestry taxes and fees, enhance the enthusiasm of forestry business entities in forestation, forest management and participation in forest ownership transfers, and activate the supply and demand in forest ownership transfer markets. For the suppliers of ownership transfers, the entities of afforestation and forest management, such as forest farmers and forest farms, they need to be given financial and policy support, and reduce forestry taxes and fees, thus providing sufficient financial subsidies for afforestation and forest management. Policy support will be shifted from collecting more taxes and fees to collecting less or no taxes and fees or even providing subsidies, and offer the same treatments for forestry as for agriculture or even better. At the same time, tax reform breaks the traditional model of capital circulation and the balance of income and expenditure of forestry agencies, for this reason, improvement of the public financial system supporting forestry agencies is needed.

8.2.2 Reducing the Tax Rate of Forestation Fund and Strictly Supervising Uses of the Fund

In accordance with the “Rules for Collection, Uses and Management of the Forestation Cultivation Fund” Finance Policy Document [2009]32, the tax rate of forestation fund was reduced by 20% and the maximum tax collected should not be higher than 10% of the sales revenue of forest products. Specify the scope of uses of the fund, which are exclusively used for development, protection and management of

forest resources, and are not allowed to be held back or diverted to any other purposes by any institutions and individuals. Prepare the budget for revenues and expenses of the forestation fund and report to the financial department at the same administrative level for examination. At the same time, ensure the cost of administrative expenses of forestry agencies are distributed via sectoral budget by a financial department at the same level.

8.2.3 Registering Legal Person Corporations and Strengthening the Market Orientation of Forest ownership Transfers of the Centers

On the primary stage of the development of forest ownership transfer centers, market mechanism was not well developed, and policies and regulations become effective interventions to guide the market development and eliminate the failure of markets. However, policies and regulations cannot completely replace the role of market mechanism. When the suppliers and demanders of forest ownership transfer reach a certain scale, the market-oriented operation of forest ownership transfer is an inevitable trend. Therefore, the development of the ownership trading centers should follow the principle of early-stage support, mid-stage guidance and late-stage independence in order to realize market-oriented and independent legal person corporate operation of organization and auction of forest ownership transfers in the centers and also implement independent financial accounting. During the primary stage of the development of forest ownership transfer centers, the market mechanism is not well developed, and the centers should be equipped with proper staffing and financial capital support to ensure the successful development of the centers.

8.3 Management and Institutions

8.3.1 Strengthening the Service Functions of the Centers and Realizing One-stop Service

On the basis of improving the existing service functions of the centers, such as forest resources assessment, forest and forest land transfer, applications for harvesting and transport licenses, plant quarantine license, collection of forest taxes and fees, and credit loan, actively expand the coverage of the forest ownership transfers, from forest and forestland to diverse forest biological resources and forest landscapes etc. Enhance consultation services in business information and investment information, consultation services in law, policy and technology, and provision of market information, establishment of fair transaction mechanisms, provision of such service functions as low-cost and high-efficiency mechanisms for the handling of transaction disputes, add more functions of forest insurance, collection of national and local taxes as agent to the centers, and realize the one-stop services.

8.3.2 Truly changing the functions of forestry agencies and providing improved services to farmers

Firstly, developing incentive policies to support and safeguard the forestry management of farmers and enable farmers to understand and make good use of the government policies for thriving forests and enriching people. Secondly, providing technology services to enable farmers to apply the latest technological achievements and enhance the productivity of forest lands. Thirdly, guarantee market services so that the timbers and forest products produced by farmers can be sold at a good price. Fourthly, providing “three forestry preventions” services (namely preventions of theft, forest fires and pests and diseases), to reduce farmers’ risks in forestry operations. Fifthly, guide and support farmers in the establishment of farmers’ forestry cooperative organizations to solve the problems of the minor household production docking with the big market. Sixthly, guide and support the construction of forestry intermediary organizations so that farmers can get more convenient services.

8.3.3 Deal with the relationship of different level FTTCs correctly

At present, Qiandongnan Prefecture has established FTTC at prefecture level, to instruct, entrust and supervise the operation of FTTCs at county level. GuiZhou province has no FTTC at provincial level now, but it may build an FTTC in future as the growing number of forest tenure trades, to standardize forest tenure trade activities all over the province. Therefore, as a provincial FTTC, it should make local trade rules, instruct and supervise lower level FTTCs, help to establish and develop FTTCs to serve forest farmers well in their forest tenure trades.

8.4 Hardware and software of the Trading System

8.4.1 Developing and Improving a Digitalized Network for Forestry Administration

Launch a local area network for governmental administration for county forestry bureaus and all forestry stations, make use of the achievements from the field demarcation survey and indoor documentation conducted by the reforms of collective forest ownerships in order to build a quick and convenient channel for examination and approval. Thus allowing all operations of applications, comments and approvals in the whole county to be online, such as applications for forest harvesting, timber transport license, plant quarantine license, wood processing license, forestry administrative law enforcement, and realizing resource sharing. The townships should be entrusted to examine and approve the applications for harvesting license for standing volume below 10 m³, facilitating forest farmers to a maximum.

Improve the information base and information sharing platform for forest

resource transfers, release and provide timely, accurate, convenient and efficient information on sales or purchase intentions for both suppliers and buyers of the forest ownerships. Also there is need to develop network-based information system for transfers, making it a portal website or one-stop service website for forest ownership transfers, bringing a breakthrough to the limitation of information sharing only between the local suppliers and buyers, removing the limitation of information sharing, and guarantees the maximization of benefits to forest farmers. Meanwhile, make use of short messages, internet and television to actively explore channels for publicizing the trading centers, periodically display ownership transfer information on supplies and demands, prices, harvesting and transport costs and profits, increase awareness of the centers and their information coverage, and take the timeliness, accuracy and coverage of information disclosure as evaluation criteria for the performance of the centers.

8.4.2 Enhancing Network Maintenance of the Forest ownership trading centers

Network failures will affect the trade. The lack of funding for network maintenance leads to network failures, which is a bottleneck restraining the normal work of the trading centers. Therefore, funding should be guaranteed to ensure normal operation of the network. As an information service, availability of network is an important guarantee for timber trade.

List of the Project Publications

GCP/CPR/038/EC Working Paper

No.	Title
WP001C	安徽省林农合作组织研究报告
WP002C	福建省林农合作组织研究报告
WP003C	贵州省林农合作组织研究报告
WP004C	湖南省林农合作组织研究报告
WP005C	江西省林农合作组织研究报告
WP006C	浙江省林农合作组织研究报告
WP007E	Assessment of Forest Farmer Cooperatives in Anhui Province
WP008E	Assessment of Forest Farmer Cooperatives in Fujian Province
WP009E	Assessment of Forest Farmer Cooperatives in Guizhou Province
WP010E	Assessment of Forest Farmer Cooperatives in Hunan Province
WP011E	Assessment of Forest Farmer Cooperatives in Jiangxi Province
WP012E	Assessment of Forest Farmer Cooperatives in Zhejiang Province
WP013C	安徽省林权交易中心研究报告
WP014C	福建省林权交易中心研究报告
WP015C	贵州省林权交易中心研究报告
WP016C	湖南省林权交易中心研究报告
WP017C	江西省林权交易中心研究报告
WP018C	浙江省林权交易中心研究报告
WP019E	Assessment of Forest Tenure Trade Centers in Anhui Province
WP020E	Assessment of Forest Tenure Trade Centers in Fujian Province
WP021E	Assessment of Forest Tenure Trade Centers in Guizhou Province
WP022E	Assessment of Forest Tenure Trade Centers in Hunan Province
WP023E	Assessment of Forest Tenure Trade Centers in Jiangxi Province
WP024E	Assessment of Forest Tenure Trade Centers in Zhejiang Province



The project “Supporting policy, legal and institutional frameworks for the reform of forest tenure in China’s collective forests and promoting knowledge exchange” supports the reform of forest tenure in China’s collective forests through strengthening policies, laws and institutions responsible for the management of collective forests in six pilot provinces. Funded by the European Union (EU) and implemented by the State Forestry Administration of China (SFA) and the United Nations Food and Agriculture Organization (FAO), the project will also promote the exchange of knowledge and experiences on forest tenure reform both within China and with other countries.

Website: <http://www.fao.org/forestry/tenure/china-reform/en/>