

Supporting policy, legal and institutional frameworks for the reform of forest tenure in China's collective forests and promoting knowledge exchange

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Assessment of Forest Farmer Cooperatives in Guizhou Province







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Assessment of Forest Farmer Cooperatives in Guizhou Province

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1. Introduction

1.1 Description of Issue

By the end of 2009, the number of Forest Farmer Cooperatives (FFCs) across China had gone beyond 35,000. The FFCs, since their emergence, have played active roles in promoting scaled-operation of forestry industries, in disseminating practical forestry technologies, in reducing transaction costs through standardized business models, as well as in enhancing the forest farmers' market competitiveness. Considered as the principal mechanism for tapping into the fullest potentials of forestry industries, in the wake of reforms on the ownership rights of formerly collective forests, FFCs have turned into an important issue for concerned government agencies, businesses and the academia.

Under the sponsorship of the European Union, UNFAO and SFA of China jointly carried out the project entitled "The Policy and Legal Supportive Framework for Reforming the Ownership Rights to the Collective Forests in China and Knowledge Enhancement Project", with the aim to optimize the policy and legal supportive framework for reform, as well as to share China's experiences in this regard. One of the expected results from the project is to improve the efficiency and effectiveness of the Forest Farmer Cooperatives (FFCs).

Guizhou is one of key provinces in the southern collective-forestry region, where forestry land accounted for 49.79% of the whole province land and forest coverage rate is 39.39%. Over 90% forestry land belonged to collectivity, and forest famer and collective forest farm are main forestry manager. Jinping county, Southeast Guizhou is one of key forestry counties in the province. Before implementation of Natural Forest Protection Program in 1999, forestry tax and fees accounted for more than 70% of the financial revenue of Jinping County. After collective forest tenure reform completed in 2007, to improve forest farmer cooperatives development is considered as one of key tasks of collective forest tenure reform by local government and forestry bureau, many non-timber forest farmer cooperatives gradually developed. Forest farmer cooperatives played a positive role in forestry practical technology popularization, improving farmers' degree of structure, broadening the scale and range of production and management, enhancing farmers' competitive capacity in the market and increasing farmers' income.

Commissioned by UNFAO in October, 2009, China National Forestry Economics and Development Research Center, SFA implemented a project to evaluate the Forest Farmer Cooperatives in Jingping county, Guizhou province. The project team, taking Jingping county as the subject case, carried out in-depth studies on 4 FFCs in the county. Participatory approaches and surveys were employed to gain insights concerning the current performance of the FFCs, their corresponding operational mechanisms, the problems they are faced with as well as their expected policy supports. Findings yielded from the surveys were in turn applied as the basis for proposals on the policy, legal and institutional frameworks that are conducive to the healthy development of the FFCs.

1.2 Literature Review

Cooperative economy is a socialized economic form, in which scattered individual producers assist and cooperate with each other in order to maintain their own economic interests and social status. It can efficiently resolve the contradictions between socialized market economy and small-scale individual operation, and in turn contribute to the vertical integration of producing, processing and trading of goods. Since the establishment of the first cooperative in Britain in 1844, such form of economy has gone through a 160-year-history and has penetrated into all economic sectors (Yang Jianbai, 1990). Relevant studies in this aspect have also been extensively carried out, especially in the agricultural sector.

Domestic researches on rural cooperative economies can basically be divided into two phases. The first phase covers the pre-1990s era when household contracted system was actively developed. The second phrase began during the post-1990s era when researchers started to give more attentions to the establishment of farmers' organizations. It is generally believed in the academic field that the disadvantages of household-based economies and the accelerating development of market economies are two of the underlying causes for the emergence of these cooperatives in rural places. The establishment of these professional cooperatives in rural areas is conducive to the realization of cost-reduction and scale-economies (Zhang Xiaoshan, 2003). Some researchers suggest that the existing rural cooperatives in China are merely organizations based on jointed-efforts in business running, thus making them not fully qualified as professional cooperatives in its real sense (Yuan Peng, 1999).

Numerous studies have so far been done on professional agricultural

cooperatives. But forestry differs from agriculture in many aspects, for instance, longer production cycle, vulnerability to forest-fires, as well as the ongoing reform on forest land property rights. In light of these distinctive features of the professional forestry cooperatives, it is highly necessary to carry out specialized studies on them. (Kong Xiangzhi, Chen Danmei, 2008).

Not many studies on professional forestry cooperatives are yet available in the academic field. The existing literature typically focuses on analyzing the necessity for its establishment, its categorization, its functions, existing problems and so on. In the wake of forestry ownership reform, the conflicts between the small-scale production and big markets, as well as that between fragmented forestlands and demands for scaled-operations, are increasingly highlighted. Proper settlement of this conflict calls for organizational innovation initiated by farming households (Cheng Yunxing, 2004). In addition, Wang Dengju and others (2006), on basis of a historical review over the development of forestry cooperatives since the founding of the People's Republic of China and the current state of their development, offered some policy proposals for promoting and regulating such organizations.

There are several different Cooperative models in China, for example, family cooperation forest farm, share cooperation forest farm (Kong Xiangzhi, et al, 2008),professional cooperatives, service professional association(Hong Yanzhen, et al.,2009). According to service type, forest farmer cooperatives can be divided into uniform sales model, uniform technology model, model contracts and orders, to provide security mode (Zhejiang Forestry Department, 2009).

Xu Xiangyang et. (2007) thought that the Government played an important role in forest farmer cooperatives establishment and development. Government can create a good system and policy environment, supply public goods, such as through the implementation of preferential economic policies on the Cooperation for the financial, banking, and tax concessions. Government sectors should co-organized with the Cooperatives, increase professional training and technical assistance and strengthen management of cooperatives' registration, supervision, audit, and arbitration.

Meanwhile, Xu Xiangyang also thought that during the cooperatives development, government excessive intervention existed, and the farmers' will was not fully respected. The study concluded that government can be as the initial driving force, but government should reduce intervention during the late development of the

cooperative. He Anhua et. al.(2009) also thought that government can support forest farmer cooperatives in the early stage of development. Some scholars believe that it is absolutely necessary that government support cooperatives in their early stage of development.

Generally speaking, domestic studies on professional forestry cooperatives only scratch the surface. More in-depth and advanced research is urgently needed.

2. Basic information

2.1 General information of Jingping County and Guizhou Province

The land area of Guizhou province is measured at 176,167km², or 1.8% of China's total. In administrative terms, the province is divided into 2 administrative districts, 3 autonomous prefectures, and 88 counties that respectively fall under the administration of 4 sub-municipalities. Situated on the hilly plateau of south-western China, 92.5% of the province's land territory is of hilly terrain. With its highest elevation in the west, the province slopes down in the other three directions, to the north, the east and the south, averaging 1,100m in altitude. The warm and humid sub-tropical climate, together with the largely diverse geographical features, offers favorable condition for the growth of huge varieties of vegetation. The natural vegetation falls into 5 main categories: needle-leaf forests, broad-leaf forests, bamboo groves, shrubbery and shrubbery-dotted grasslands, swamps and aquatic plants. An important forestry region in southern China, the forestlands of Guizhou province take up approximately half of its total land areas. More than 90% of the forestlands are collectively owned, with nearly 0.27 hectares per capita. The abundant forest resources and favorable natural conditions endow the province with tremendous potentials for its forestry industry to develop.

As one of the ten key forestry counties and a major site for the pilot reform programs in the province, in addition to being the central growing base for southern firs, Jinping County boasts unique advantages to develop forest industry. Therefore, forestry plays an important role in the economical and social development of the County. Of the county's total 2,395,000mu lands, 1,896,100mu, or about 79.2%, are forestlands, with a coverage of 72.01% and a standing stock of 7,658,300m³, which can be further broken down to: 5,082,000m³ in young- and middle-aged forests, 2,554,600m³ in mature and near-/over-mature forests, and another 21,700m³ in sparse

forests. The per capita standing stock of the province amounts to 35m³.



Figure 1 Geographical location of Jinping County, Guizhou Province (Red point)

Prior to the implementation of natural forest protection projects in 1999, forestry revenues accounted for more than 70% of the incomes of Jinping County. Since 2007, Jinping County initiated a reform of forest right system, whose main content is "clarifying property rights, releasing taxation, enhancing autonomy for management," and standardizing the transference", and has achieved remarkable results. With the accomplishment of the main reform of forest rights, the organizational structures, production modes, and operational patterns of forestry have also gone through profound changes, particularly in that the forestry farmers have become the central players in forestry operations. Nevertheless, problems also arose, among which are: the smaller and scattered "household-based businesses", as well as their relatively weaker resistance against major disasters etc. How can the conflicts between the small-scale operations and the demands of the ever-changing big market be solved? Practice has proven that developing professional forestry cooperatives that are established on basis of joint operations is the fundamental way to promote further development of forest industries, especially in enabling the "small scale household-based forestry entities" to meet the needs of the "big market".

2.2 Profile of the Study Villages

Four representative FFCs in Jingping county are identified for case studies, they

are: Professional Orange Cooperative in Maoping township, Professional Tea-oil Camellia Cooperative in Xinhua Township, Longchi Fruits Orchards in Dunzhai township, and Yangxi Forestry Plant in Maoping township.

2.2.1 Yangxi Village, Maoping Township

Located in the north-eastern part of Jingping county, Yangxi village has an average altitude of 300m, bordering on Tianzhu county in the north-east and Xiazhai village in the west, with Qingshuijiang River flowing by in its south. The distance between the village and the central township and the county is 2km and 10km respectively. The village is composed of 8 sub-groups dwelling in 5 natural habitats, with 166 households and a population of 756, 98% of which belong to Dong ethnicity. The total lands of the village measure at 14,500mu, of which 11,800mu, or 81.4%, are of forestlands, making up a coverage of 89%. The primary tree species are firs, mason pines (timber-yielding forests) and oranges (economic forest). Fir stands take up 80% of the total forests, reaching 9,440mu in size. The size of the orange orchards falls roughly around 650mu. About 6,000mu of forests, or over 50%, belong to public welfare forests. Farmlands in the village include both water-lands and dry-lands, measuring respectively at 302mu and 120mu. The entire village has convenient access to roads, water and electricity supplies, with 90% of the households equipped with TV and telephones. The labor force of the village is composed of 453 people, with about 96 of which currently working in Guangdong province and Zhejiang province as migratory workers. Rice, basically sufficient for the local villagers' own use, is the principal farm produce, supplemented by small quantity of corn and other vegetables. Orange is the primary source of income for the villagers. In addition, 3 households are involved in a sheep-raising FFC, whose sheep stock is calculated at roughly 150.

2.2.2 Ouyang Village, Xinhua Township

Situated in the eastern part of Xinhua Township and south-eastern part of Jingping county, Ouyang village, 400m in altitude, is 1.5km and 50km away from the central site of the township and county respectively. The total size of the village amounts to 9,000mu, of which 6,500mu, or 72.2%, are used for the forestry sector.

Oil-Tea forests measure at 5,700mu, accounting for 87.7% of the forested lands, with the rest being of firs, oranges and pears. The farmlands, roughly 2,000mu in size, can be broken down to 1,073mu of rice lands, 700mu of dry lands and another 300mu being of reclaimed lands. The villagers have access to drinking water taken from drilled wells, biomass gas supplies. Thanks to nationwide programs such as Convenient Road to All Villages and TV Coverage Enhancement for All Villages, local dwellers enjoy fairly good services in these regards. In addition to one provincial highway (Jingrong Highway) that passes by, 9m of village roads are also available. The motor vehicles owned by the villagers include 14 small tractors and less then 10 trucks. Belonging respectively to 8 sub-village groups that are situated in 4 natural habitats, the 382 households here make up a population of 1,780, with its labor force accounting for 50%. Slightly over 30% of the population received high-school education, with one person currently reading in university. Destinations for the local migratory workers mainly include Guangdong, Zhejiang and Fujian provinces. The primary agricultural crop is rice, supplemented by oil-tea and vegetables. Net annual income per capita falls approximately at RMB3,000.

2.2.3 Xiazhai Village, Maoping Township

Located in the central eastern part of Maoping township and 9km away from the central city in which the county government is situated, Xiazhai village has a population of 950, who belong respectively to 222 households in 10 sub-village groups. The village is composed of 5 natural dwelling communities of both Miao and Dong ethnic minorities that dot along the banks of Qingshuijiang River. Its total labor force includes 695 people, of which 283 work away from home as migratory workers. The village is endowed with advantageous geographic positions and abundant natural resources. Of its total area of 14,000mu, 11,706mu belong to forestlands, including 9,129mu of public welfare forests. Among the 997.65mu of permanent cultivated farmlands, 392.5mu are used for rice-growing. Being the primary source of incomes, the fragrant orange-growing sector involves 90 households and 330mu of forests, averaging 3.7mu per household. The annual orange output of the village amounts to 200,000kg, translating into an average household revenue of RMB11,000. Alternatively speaking, incomes derived from orange-growing make up to 75% of the villagers' annual total.

Tianxi Timber Co. Ltd, a large-scale wood processing enterprise in Jingping

county, is situated in the village. The Professional Orange Cooperative is the only FFC in the village. Relatively developed infrastructure is available here, with 130 program-controlled telephones installed and 99% households having access to close-circuited TV broadcasting. Walkways in the whole village have either been hardened or paved, not to mention the readily available tapped drinking water. In addition, there are also 67 bio-gas wells in the village, which save up to 120m³ of fuelwood annually and play constructive roles in the conservation of forest resources.

2.2.4 Longchi Village, Dunzhai Township

Longchi Village is situated in the south-western part of Dunzhai Township, 7km and 40km away from the respective locations of the township and county government. Its 1998-people-population, belonging to 551 households, makes up 10 sub-village groups that dwell respectively in 4 natural habitats. The labor force in the village includes 789 people, of which 184 are migratory workers. There are 48 primary fruit growing households, with 6 duly honored for their respective achievements in getting rich through science/technology. Of the village's total 19,673mu land area, 17,613mu are used by the forestry sector, averaging 8.8mu per capita. As for the crop lands, the sizes of rice-lands and arid-lands fall correspondingly at 1,460mu and 600mu. The annual per capita income is RMB3,560, together with an average crop output of 420kg. Longchi Fruits Orchards, Jinxing Orchard, and Jinbang Orchards are all situated within the village's territory. In addition to the 800mu self-owned orchards, the local farmers also operate, under contracted terms, on 2,000mu of fruit forests that belong to the Fruit Companies. Fruit growing, featuring that of oranges (*Peng Gan*), constitutes the pillar industry in the village, generating an annual average household revenue of RMB4,000, with the highest reaching RMB20,000.

All the inhabited communities in the village have convenient accesses to roads (including 1,500m hardened/paved walkways), electricity, and tapped water. Full set of fire-fighting facilities, including 9 water pools, 2 vehicles, 300m of firefighting pipes, and 11 firefighting hydrants, are available for the Fruit Cooperative to use. Irrigation systems (for instance, the dams and power-driven irrigating stations on Liangjianghe Stream) have also been constructed on the upper reaches of the 3 streams that run through the village to guarantee the water demands of both rice fields and fruit orchards. A Water-saving irrigation system was put in place in Longchi Fruits Orchards in 2009. Moreover, with 268 program-controlled telephones installed

and close-circuited TV broadcasting accessible to over 99% of the households, the villagers are provided with timely and convenient information about the market as well as the outside world.

3. Forestry Status

3.1 Forest tenure

Following the forestry reform carried out through 1984—1985, which featured the "3 clarification in the forestry sector", the forestry lands in Jingping county were classified into 2 large categories: self-reserved lands and responsibility-contracted lands. Fruit forests, oil-tea forests and fir forests were all put under the management of households on contracted terms. However, because of labor shortage and limited market demands, operations and management were relatively quite extensive and primitive, resulting in poor economic efficiencies as well as lower outputs. To address these problems, an extensive pilot program to reform the forestry property right system was launched in Jingping county in 2007, highlighting such objectives as: clearly-defined rights, alleviated taxes/administrative fees, emancipated management models, and well-regulated transactions. Remarkable achievements have been made through the program, with 1,750,000mu of forestlands, or 92.2% of the county's total, having been involved. Property certificates have been duly issued for 1,736,000mu of lands, taking up 99.2%. The forestlands of the county are formally registered as (160,000mu), follows: self-reserved lands responsibility-contracted lands and collectively-managed forests (575,000mu), accounting respectively for 9.1%, 57.2% and 32.7% of the total 1,750,000mu that were involved in the reform.

3.2 Forest Types

In geographical terms, Jingping is situated in the sub-tropical evergreen broadleaf forest belt. Because of the impacts of natural evolution and human activities, the primitive forests and vegetation have been replaced by secondary vegetations dominated by fir species. The forests in the county chiefly include 8 types: fir stands, mason pine stands, mixed fir and mason pine stands, bamboo groves, camellia forests, evergreen broadleaf stands (oaks, sweetgums, camptotheca, camphor, eucommia, and etc), shrubberies as well as grasslands.

3.3 Forest Products

The main forest products are timber and forest specialties. The timber production is about 40,000m³, which can support sufficient material for local timber processing in the county. Camellia oil is a renowned green product of Jingping county. Its annual outputs of rosin and turpentine amount to 4,000 tons and 600 tons respectively. In 2008, the oranges grown in the county were certified by Guizhou province as Hazard-free Health-building Products and Hazard-free Agricultural Products.

3.4 Management and Institution

The Forestry Bureau of the county is in charge of managing its forest products, and the forestry workstations at township level are responsible for actually implementing such programs as afforestation, fire-prevention, pest/disease prevention and control, technology dissemination and cutting quotas reviewing. In the wake of forestry right reform, the majority of forestry resources previously owned by the villages are contracted to the households. Only a small proportion of the forestlands remain collectively owned and are managed by persons entrusted by corresponding village committees. Applications filed by local farmers to harvest the trees shall be subjected to public scrutiny of all villagers and duly approved by township authorities. Fire, pest/disease prevention and control are typically effected jointly by the villagers.

4. The Status of FFCs

4.1 Basic Profiles of the 4 FFCs

The research team investigated 127 farmers, the status of production, living conditions and income of these household are as follows.

Firewood was the main fuel source used by most villagers. Tap water was available in every village. Almost half of the villagers lived in wooden houses, some in brick rooms, the rest in brick-wood structure houses.

In terms of the primary productive activities, the samples households in each village relied most heavily on crop planting as the chief means for revenues, followed in turn by forestry and livestock breeding. In other words, the sample households' productive structure was mainly centered on agricultural production, with forestry and livestock breeding as the subsidiary means. The input/output ratio for the 3 above-mentioned means of production is 1:3.74, 1:1.99 and 1:2.65 respectively.

The average annual income was comparatively low, between 5,000-2,0000 yuan

basically, lower than the average standard of living in common rural areas. The net income per capita of the households was about 3,000 yuan, slightly higher than the corresponding figure for Guizhou province, or 2,797 yuan. From the perspective of income structure, income earned by migrant workers accounted for the largest proportion in the average income per household, followed by crop planting, livestock breeding, forestry and others.

4.1.1 Longchi Fruits Orchards in Dunzhai Township

Initiated in November, 1993, Longchi Fruits Orchards is a key program sponsored by the CPC Committee and the government of Jingping county to put into practice its strategic shift for the forestry sector and boost the comprehensive development of the mountainous regions. The Orchards are composed of 17 sub-plantations, employing 28 professional technicians and 520 wardens. The sub-plantations can be divided into 2 large categories: State-owned ones and local farmers-owned ones, with the former being the dominant type. Rates at which the farmers contract the State-owned orchards range from RMB50 through RMB100.

Questionnaires designed for this study are distributed to 29 households in Sanhe Village of Dunzhai Township (with a population of 1,500, approximately 1,000 households are engaged in orange growing, covering 4,000mu in fruit forests). Among the interviewed households, only 3 haven't joined FFCs, the rest 26 all being members of Jingping Fruit Association.

In Longchi Fruit Plant, 90% of the sample households still used firewood as their main fuel source. 50% of the sample residents drank well water. 80% of the residents lived in wooden houses and only 20% in brick houses. What's more, 20% of the residents had no household electrical appliances. Only 30% of the residents owned vehicles such as tractors, motorcycles and so on. In 2008, about one third of the households' annual net income was below 5,000 yuan. Over half of the households' annual net income was above 10,000 yuan. But only one sixth of the households had over 20,000 yuan of annual net income. The average annual income for the 29 surveyed households was 8,725 yuan in 2008, far less than 10,000 yuan, worse than the average living standard of typical rural places, as shown in figure 2.

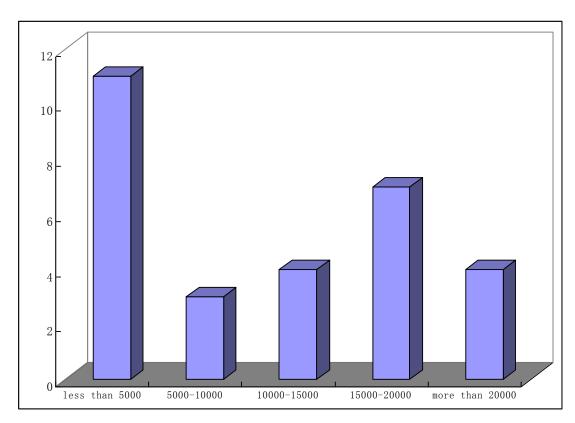


Figure 2 Sample households' family net income chart in Longchi fruit field 2008

4.1.2 Professional Orange Cooperative in Maoping Township

This Cooperative, with its headquarters based in Maoping township, is situated in the upper reaches of Yuanjiang River (specifically speaking, along the banks of Qingshui River, a tributary of Yuanjiang). Membership-bearing households are chiefly from 4 natural villages and 1 residential community: 62 in Shangzhai village, 61 in Xiazhai village, 16 in Yangxi village, 32 in Xinjian village, and 13 in the residential community. The current 198 members are 100% local farmers (male: female gender proportion being 8:2), all aged over 40, with 40% of whom have received high school educations. It was formally established in April, 2004 under the initiatives of 5 members who pooled RMB1,700 as capital, together with forestlands sized 168mu. The standing board of the Cooperative is composed of 15 members, including 1 chairperson, 2 vice chairs and 1 secretary. In addition, there is also 1 executive board member and 31 representatives of the members. It was officially registered with the local industrial and commercial authority as an FFC on July 16, 2007.

The FFC grows a sole fruit product, fragrant oranges, which is primarily sold to

Guiyang city, Kaili city in Guizhou province, Changsha city in Hunan province, as well as Nanning city in Guangxi Zhuang Autonomous Region. As of 2008, the orchards run by the FFC had reached 3,600mu, of which 1,286mu had been in fruit-bearing stage for 8 years, yielding a total output of 75,000 tons. The gross revenue of the FFC for year 2008 was RMB810,000, which, after deducing the RMB350,000-worth operational costs, translates into an annual net profit of RMB406,000. Besides, the Cooperative also earned RMB278,000 as returned surplus (calculated on basis of trade volume), RMB200,000-worth of MOA subsidies, and RMB12,000 in membership fees. Meanwhile, the boom of the FFC has also encouraged 1,430 households in its neighboring villages, townships even neighboring counties to engage in fragrant orange growing.

In the investigated farmers, around 54% of the households used electricity as fuel source, 32% firewood, 14% methane. Tap water was the main drinking water source. 77% of the households lived in wooden houses, with a few in brick houses. 52% of the surveyed households had an annual net income of over 20,000 yuan, 21% 15,000-20,000 yuan, and 17% 10,000-15,000 yuan. According to statistics, the average annual net income for the 30 sample households was 24620.7 yuan, as shown in figure 3.

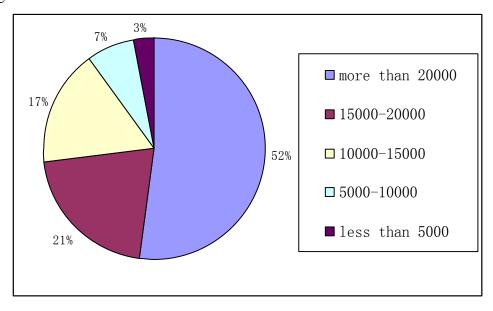


Figure 3 Household's 2008 net income chart of the sample households in the Orange cooperative

4.1.3 Yangxi Village-level Forest Farm in Maoping Township

Following the forestry reform in 2007, Yangxi Forestry Association was set up to manage the village's collectively-owned forests (including around 4,500mu of timber-yielding forests and over 40mu of economic forests). Ownership right of these forests goes to all villagers. Specially entrusted forest stewards and rangers are responsible for the daily management and maintenance of the forests. Rather than being an organization formally registered with competent industrial and commercial authority, it is just an agency that was filed with local forestry authority. Due to the constraints imposed by the national policy for natural forest protection and harvest quotas, business activities carried out by the organization are chiefly aimed at fire-prevention. To put it differently, the association is just an entity affiliated to the village committee. With a monthly wage of RMB200 given by the village committee, the director of the association does not show much enthusiasm for managing the forests soundly. Though the villagers are all nominal stakeholders of the plant, there are in fact not very close ties between the association and the villagers.

In Yangxi village, the average size of farmlands and forestlands owned by the sample households are 2.77mu and 25.21 mu respectively. Over 69.7% of the residents still used firewood as their main fuel source. Tap water was the only drinking water source in this village. Around 45.45% of the residents lived in wooden houses, another 45.45% in brick houses, and the rest in brick-wood structure houses. In terms of annual net income, 33.33% of the households earned less than 5,000 yuan, with those households whose annual income are higher than 10,000 yuan and 20,000 yuan taking up 36.67% and 16.67% respectively. In terms of income structure, income from working as migrant workers accounted for the largest income proportion, reaching 51.52%, followed by 17.62% from crop production, 8.36% from livestock breeding, 1.3% from forestry and 0.19% of other sources. The household's net income situation in 2008 is shown in Figure 4.

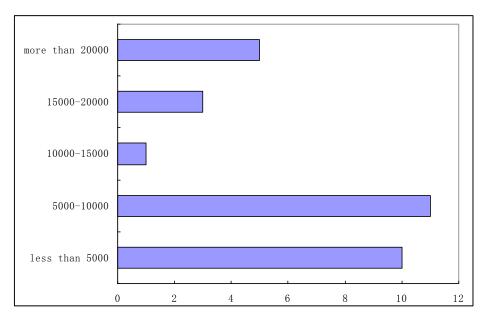


Figure 4 Sample households' 2008 net income chart in Yangxi village

4.1.4 Professional Camellia Oil-tea Cooperative in Xinhua Township

The Professional Camellia Oil-tea Cooperative in Xinhua Township was formally registered with the county industrial and commercial authority on July 12, 2007, with its registered business site in Ouyang village. Though there were only 100 members, all from Ouyang village, upon its establishment, its membership increased to 180 at the time when this study was carried out, among which 50 are from Xinhua village. In terms of gender, only one member is of female. In terms of education, those who have received elementary education and secondary education account respectively for 40% and 60%. Roughly 70-80% of the members are in the 41-50 age group. The size of camellia oil-tea forests measure more than 3,000mu. Meanwhile, there are also over 2,000mu of such forests not covered by the Cooperative, mainly because of their low output rates and over-density.

The first general assembly of the FFC was convened on July 12, 2007, during which its *Charter* was formally approved. Standing board was also elected and set up at the assembly, including 1 chairperson, 2 vice chairs, 11 board members, together with another 3-member supervisory committee.

Among the 35 sample households of camellia cooperative in Xinhua Township, the average size of farmlands and forestlands were 5.11 mu and 22.03 mu respectively. Approximately 77.14% of the residents relied on firewood for fuel source. Well water

was the main source of drinking water. Compared with the 77.14% of residents living in wooden houses, only 2.86% of the local people own brick houses, with the rest in brick-wood structure houses. Around 15.15% of the households' annual net income was below 5,000 yuan, over 50% of the households boast an income higher than 10,000 yuan, and another 15.15% higher than 20,000 yuan. The average annual income in 2008 for the 33 surveyed households, of 16,455.76 yuan, was lower than the corresponding figure for average rural households. In contrast, the per capita net income for the 33 surveyed households, or 3,082.3 yuan, was slightly higher than the corresponding figure for Guizhou province, or 2,797 yuan. In terms of income structure, income brought by the migrant workers took up the highest proportion, reaching 48.24%, followed by crop plantation 23.98%, forestry 12.16%, livestock breeding 10.47% and other income 5.15%, as shown in figure 5.

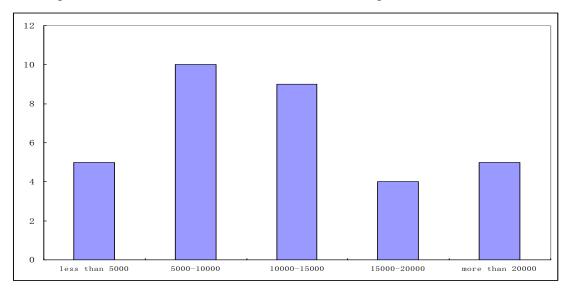


Figure 5 Sample households' 2008 net income chart of the camellia cooperative in Xinhua

4.2 FFC Management

These four forest farmer Cooperatives are developed according to the will of their membership households to play active roles in integrating the small-scale production of individual households with the constantly changing large market. During the development process, these organizations not only expanded in scales but have also gone through substantial transformation. The previous loose-structured organization and poor-coordinated operational modes were replaced by more orderly and fine-tuned approaches that have direct economic impacts. Intra-village cooperation was

substituted by inter-township cooperation, with the focus of services shifting from the post-production phase to the pre- and in-production phases as well.

With acceptance of the post-production pre-and in-production service, the farmers' transfer cost reduced significantly. As the cooperatives implemented product brand building, the product awareness and market competitiveness are gradually increased.

On the other hand, some new phenomena also took place with respect to the level of management. Democratic management came into being; internal organizational structure was gradually improved and the norms of democracy were formulated. In terms of benefit allotment, the allotment of benefit and return of surplus were paid special attention to in order to strengthen the cohesion of the cooperatives.

It is revealed in the interview that the management of both the Professional Camellia Oil-tea Cooperative in Xinhua Township and the Professional Orange Cooperative in Maoping Township comply with *The Law of the People's Republic of China on Specialized Farmers Cooperatives*. Both the 2 FFCs, under the guidance of their corresponding *Charter*, have the full set of operational and management structure, including board of directors and supervisory board. In the case of Yangxi Forestry Plant in Maoping Township, the management is named by the village committee. Though all villagers are entitled to bonus distribution, they do not show much enthusiasm for the actual operation of the Plant. The Fruits Orchards in Dunzhai Township is currently run by a fruit company affiliated to the Forestry Department of the county. The local farmers contribute in the form of lands and are entitled to bonus distribution, but they do not take part in its management directly.

4.3 Operations and Practices

4.3.1 Longchi Fruits Orchards in Dunzhai Township

Longchi Fruits Orchards in Dunzhai Township was originally set up by the government and is currently run by a fruit company affiliated to the Forestry Department of the county, which takes sole responsibility for the daily operations of the Orchards, whereas the farmers are not directly involved. The running of the Orchards complies to a general principle that features both "uniformity" and "distinction", namely, while uniformed approaches are adopted in the establishment of

the orchards, in technology application and in fruit sales, household variations are duly taken into consideration in such procedures as land-contracting, actual operations and in benefit settlements. As to the management mode, "uniformed technological guidance" is integrated with "household responsibility for their contracted forests". The incomes for the Orchards are chiefly derived from contract fees for running the fruit forests, which are in turn divided between the Orchards and the local farmers (based on their respectively land-contribution) at a ratio of 84:16. Expenditures mainly include such items as: salary/wages, costs occurred in productive activities, scientific research funds and daily operational costs. The largest portion of the expenditure goes to salaries/wages for the managerial staff, followed in turn by stake-bonus and research funds, whereas costs for daily operations and for hiring technical consultants are comparatively less. Incomes derived from land-capitals are mainly used for the village/township running and for improving the local households' livelihoods.

4.3.2 Professional Orange Cooperative in Maoping Township

The Professional Orange Cooperative in Maoping Township was initially set up by several major orange growers who have all played crucial roles in the later booming of the Cooperative. For instance, thanks to the initiatives of the leading growers, the Cooperative was formally registered with local industrial and commercial authority, together with the establishment of "Maoping Orange" as a registered trademark. In terms of productive operations, the local farmers invest voluntarily to establish their orchards on their own lands and carry out corresponding productive efforts under the guidance of uniformed technical codes and product standards prepared by the FFC. In the sales process, the FFC also plays an active role in contacting prospective buyers and in deciding on premium prices for the fruits in line with the market situation, so as to best guard the interests of the farmers. Operational costs are mainly derived from the capital inputs of the stakeholders as well as the FFC's accumulated profits. Uniformed approaches are adopted in branding, grading, packaging, pricing and selling the fruits. Profits are distributed as follows: stakeholder bonus: farmers surplus: accumulated capitals = 40:20:40.

4.3.3 Yangxi Village-level Forest Farm in Maoping Township

With its property rights going to the village, the Collectively-owned Forestry

Association is managed and maintained by people specially entrusted by the village committee for this purpose. Decision-making power concerning the plant operations rests with the village committee. Because of the constraints imposed by the national policies for natural forest protection and for harvesting quotas, it is very hard for the local farmers to acquire quotas for cutting commercial timbers. In other words, the primary task of the Association is the daily maintenance of the forests, and therefore the leaders of it do not have much incentive for managing it soundly. Eighty percent of the earnings from timber-production are distributed evenly among the villagers. In 2008, the village put 203mu of forests on auction to derive RMB508,000 in income. Except for the 15% that are allocated for reforestation and forest tending, and another 5% reserved as public welfare funds of the village, the rest, about RMB400,000 in value, were distributed to the villagers.

4.3.4 Professional Camellia Oil-tea Cooperative in Xinhua Township

With the core management positions taken by key members of the village committee, the latter plays critical roles in the Cooperative's major decision-making. Democratic approach is employed in its internal management to ensure that the wills of the management are put into practice only upon the acknowledgement of most members. The Cooperative is committed to obtaining supportive programs and technical guidance from the government to facilitate its efforts in oil-tea forest construction. Typically, core members of the Cooperative, when oil-tea forest upgrading programs are obtained, will put them into practice on their own lands. The FFC is only loosely organized, with the households responsible for their own production and sales, so there is not interest-distribution involved.

4.4 Policy Effects

China promulgated and implemented *Law of the People's Republic of China on Specialized Farmers Cooperatives* in 2007. Although local government and forestry sector did a lot of work to further forest farmer cooperatives, there are hysteresis phenomenon in carrying out the law and related supporting policy.

As for forest farmer cooperatives registration management, only the forest farmer cooperatives which are engaged in cash tree cultivation and processing were registered by industry and commerce bureau on county level. The forest farmer

cooperatives which are engaged in timber forest cultivation have not been registered by industry and commerce bureau on county level. Therefore, these farms could not be engaged in timber processing.

The mode of technology training provided by FFCs is simple, and the fixed training mechanism has not been established. These four FFCs all provided technology services to FFCs members, but the theory class is more than site guidance and practical technology training is more than market and law knowledge training. Training funds are mostly from government's integrated projects funds. The government has no special funds for FFCs training.

Local government did not make counterpart loan policy for FFCs. The policies of forest property mortgage and farmer's small quantum have not been carried out in Jinping county. The issues of FFCs' funding shortage should be further studied.

4.5 Existing Problems

Generally speaking, the FFCs in Jingping county are still in their primary stage of development, the principal challenges being talent-shortage, limited distribution channels, not to mention their lack of marketing competence. At present, leaders of the FFCs are either members of village committees or key growers, who are in urgent need of marketing expertise. Consequentially, marketing constitutes a major bottleneck for the healthy development of the FFCs. Even though certain FFCs have already established their own brands, they typically do poorly in publicity campaigns and have not yet gained much recognition on the market. In terms of the external environments, the technical training programs and low-yielding forest upgrading programs are far from enough to satisfy the farmers' needs. If no established mechanism is in place to regulate the work, there is high risk that the FFC-initiated technical training programs might end up in failure for lack of funding. The existing harvesting quotas system, together with unfavorable policies for setting up timber-processing businesses, constitutes major constraining factors that prevent the farmers' entry into FFCs that specialize in running timber-yielding forests.

5. Attitudes, behavior and Views from Various Stakeholders

5.1 The county-level and town-level governments

The forestry bureau at county level and the township governments are all quite

supportive to the development of the FFCs, providing favorable treatments in technological training, information-access as well as project subsidization. The forestry bureau at county level prioritizes FFC development in implementing its forestry reform, and has achieved a lot in technology dissemination and low-yielding forests upgrading initiatives. The county level government has worked out a long-term plan to boost its economic forests by planting 200,000mu of camellia forest, 100,000mu of walnut forest and another 100,000mu of bamboo groves. Take the Oil-tea Cooperative for instance, the township government plays active roles in sponsoring technical consultation and training, and in launching Internet-based publicity campaigns to improve market-awareness of their products. Favourable policies proposed by the Forestry Department of the county are currently being reviewed to grant more harvesting quotas for the FFCs that are performing well. Longchi Fruit Plant got the support from the two levels of governments of the county and the township at the very beginning of its establishment in terms of fund, technology and the land. The government of Maoping town provided the information of orange sales and invited the county specialists to give technological consultation.

The Agricultural Department of the county thinks that the FFCs are organizations initiated either by key households engaged in a certain industry or by corresponding village committees to run the businesses under the principle of "joint-ownership, joint-management and benefit-sharing", under which the farming household are free to join or withdraw on voluntary basis. They identify the existing problems as: being of small scale and correspondingly economically vulnerable; being loose in management structure and poor in service-provision; of poorly conceived management mechanism that consequently results in low efficiency; not being appealing enough to the farmers in boosting their incomes. They conclude with the following proposals: 1) The local government should come up with feasible supportive policies for the FFCs, highlighting trainings; 2) Rural financial cooperatives should be set up to offer necessary financial supports; 3) Management mechanism of the FFCs are to be optimized. On the part of the FFCs themselves, more active endeavours are needed to establish their own unique branded products to penetrate into markets. Meanwhile, more sophisticated systems for running the organizations must be put into place so as to streamline and regulate their operations.

5.2 The Village Committee

Most of the people on the village committees are also key members in charge of the FFCs, directly involved in their running and management. The Head of the village committee in Xiazhai village reports that the focus of their work is in the post-production and pre-sales period, during which the principal tasks are contacting major buyers so as to gain wider access to the market. In the case of the Camellia Cooperative in Xinhua Township, the person in chare is not only responsible for initiating and organizing various activities. but also enjoys government-subsidized projects than the other members. As to the Collective-owned Forestry Plant in Yangxi village, which relies more on cutting the collective forests for revenue, the village committee does not show much interests in the management and running of the Plant. Instead, the committee is currently making active preparations for setting up a new FFC to engage in bamboo growing.

The village committee members identify the principal challenges faced by the FFCs as: low economic returns from selling such raw materials as logs etc; complicated procedures involved in the application for establishing timber-processing businesses; limited harvesting quotas; insufficient funding for implementing programs to upgrade low-yielding forests; low national compensatory rates for maintaining public welfare forests; insufficient funds for improving irrigation facilities and other infrastructure; products being of poor quality; shortage in technologies and marketing information, which consequently results in limited channels for sales. They suggest that the government should play more active roles in offering funds for infrastructural development and in helping product promotions.

5.3 The Forest Farmers

The Survey indicates that the majority of the farming households that joined the FFCs are satisfied with the performance of the organizations, and meanwhile, they also expect that both the government and the FFCs will provide more and better services. Take the Orange Cooperative in Maoping Township for instance, 67.9% of the households are satisfied with the organization in such aspects as management, services as well as the ways in which the services are provided, but they are not satisfied with the FFC's performance in "making available sales information" and "in organizing irrigation facilities construction". Similarly, members of the Longchi Fruits Orchards also expect that the FFC and the government should do more in helping them to gain timely access to market information and in solving their problems in

orchards irrigation. As to the Camellia Cooperative in Xinhua Township, the households identify their principal challenge as insufficient funds for reclaiming the forests, and hence hope that the government can strengthen their work in subsidizing low-yielding forest upgrading projects. Villagers in Yangxi do not show much care about the running of the Plant since their opportunities for getting jobs from the Plant are very limited.

5.4 Other Stakeholders

The industrial and commercial administration of the county regards organizations engaged in timber-processing industry as business enterprises and is not exploring for ways to redefine such organizations as FFCs. They also point out that the FFCs are putting more of their efforts on acquiring projects than actually carrying out their due tasks, and propose that concerned government agencies should, while strengthening their supportive work, also strengthen supervision of the FFCs. The Agricultural Department of the county identifies the major problems facing the FFCs as: being of small scale and correspondingly economically vulnerable; being loose in management structure and poor in service-provision; of poorly conceived management mechanism that consequently results in low efficiency; not being appealing enough to the farmers in boosting their incomes. They conclude with the following proposals: 1) The local government should come up with feasible supportive policies for the FFCs, highlighting trainings; 2) Rural financial cooperatives should be set up to offer necessary financial supports; 3) Management mechanism of the FFCs is to be optimized. On the part of the FFCs themselves, more active endeavour is needed to establish their own unique branded products to penetrate into markets. Meanwhile, more sophisticated systems for running the organizations must be put into place so as to streamline and regulate their operations.

6. Problem Analysis

6.1 Lessons and experiences

Comparatively speaking, the Orange Cooperative and the Fruits Orchards, both enjoying higher degrees of marketization, outperform the Camellia Cooperative and the Forest Farm, both of which are less professionalized and less market oriented, in their corresponding efficiencies. Implications that can be drawn from the studies are as follows: 1) The farmers' initiative and enthusiasm for involvement are the most

fundamental basis for FFC healthy development; 2) Regulated system and competent managerial staff are the guarantee for successful FFCs. Take for instance, the Orange Cooperative, the Fruits Orchards and the Camellia Cooperative have all developed sophisticated internal management systems, with the first having even gone further to have their own registered trademark and brand. Those in chare of these 3 Cooperatives are either leading growers or members of the village committee, all of whom have relatively better organizing abilities and a more extensive network of human relations. 3) Supportive governmental departments are of crucial importance to FFC sound development. Throughout the emergence and development of the FFCs, corresponding governments play very constructive roles. The Fruits Orchards was initially established by the county government. The Orange Cooperative and the Camellia Cooperative both rely heavily on concerned governmental agencies in technical training and project implementation. 4) Insufficient funding and untimely access to marketing information are the major bottlenecks faced by the FFCs. The Camellia Cooperative suffers most severely in labor shortage and inadequate funds for implementing low-yielding forest upgrading projects, as well as in not being able to gain market information timely. Similarly, the Fruits Orchards and the Orange Cooperative are both most seriously challenged by their limited sales channels.

The FFCs in the county are still in their primary stage of development, mostly focusing on the growth and sales of economic fruits/nuts. No FFC featuring the management of timber forests is yet available. Their daily operations and management, to a large extent, depend on the supports of local governments, for instance, in technical training, in compiling *FFC Charter*, as well as in marketing campaigns. The principle of democratic management is observed in the FFCs, as proved by the procedures adopted in share-calculation, benefit-distribution, as well as in the election of the board, the council and the supervisory committee. Technical services provided by the FFCs are generally approved by the villagers. Farmers engaged in growing economic forests (fruit/nut) hope that the government will play more constructive roles in constructing irrigation facilities, offering market information, advertising, and in sponsoring technical training. The performance of the FFCs typically depends on the roles played by the core/leading members of the organization. For instance, thanks to the innovative role assumed by the initiator of Maoping Professional Orange Cooperative, this organization went through steady improvements in both its

standardized scale-operation and its market competitiveness. In contrast, Xinhua Professional Oil tea Cooperative did relatively worse in taking advantages of the FFCs, mainly because there is no leading core member to penetrate the market, which resulted in poor availability of market information and unitary sales channel.

6.2 Incentives and disincentives for forest management by farmers' cooperatives

The FFCs that feature camellia, orange and other fruits have been rewarded with noticeable economic efficiencies, playing critical roles in such aspects as: providing more job opportunities, technique enhancement, expanding production scales and in raising market awareness of their corresponding products. The incentives for the FFCs include both external ones and internal ones. 1) External Policy Incentives: These organizations all have been granted with favourable policies by corresponding government departments throughout their development, covering technical guidance, information access, and project implementation, the effects of which are further multiplied through the cooperative mechanism within these organizations. 2) Internal Incentives: The management expertise of those in charge of such organizations has turned out to be of tremendous importance for the success of the FFCs. The managerial staff, typically enjoying extensive network of human relations and better communicative skills, can effectively initiate and organize programs that are contributory to their success. Through professionalization, standardization and marketization, the above-mentioned 3 FFCs help to achieve economies-of-scale, reduced-operational-costs, and in turn lead to higher incomes for the membership households. Compared with the emerging momentum of the 3 successful cases, the Collectively-owned Forest Farm in Yangxi Village fairs less than satisfactorily. Constrained by the NFPP and Harvest Quotas System, the forest farm has difficulties in ensuring steady quotas for commercial cutting to reach economies-of-scale. In conclusion, policy factors make the most decisive elements for the development of commercial forests in Jingping county. The booming of FFCs that feature market oriented and professionalized running of other forestry products can be attributed to both supportive policies and the managing expertises of those in charge.

6.3 Supportive Policies and Systems

With the promulgation of favourable national policies for forestry reform, as highlighted in SFA's *Guidelines for Boosting the Development of Specialized Forest*

Famer Cooperatives, FFCs are endowed with a very conducive environment for further healthy development.

The forestry authority of Jingping county also identifies "serving the development of FFCs" as the priority task in its drive to reform the forestry sector. In its Knowledge Empowerment Initiatives, on-site training and consultations have been carried out in camellia/orange cultivation, new species development and pest/disease prevention. The forestry authority also tap into the resources of national forestry programs, such as National Poverty-alleviation Program, Japanese Governmental Loans, Vegetation Restoration Program, and Farmland Reclamation Program, to acquire the needed funds for making technical training available to the local farmers. Joint program has also been launched with the Forestry Academy of Guizhou Province to select fine-quality camellia seeds. Besides, pilot programs are also under way to give priorities to the FFCs in allocating cutting quotas.

Previously, focus was given by the industrial and commercial authority of Jingping county to the professional cooperatives that are engaged in crop-growing and animal husbandry. Now, it is considering shifting its focus to the registration of FFCs that specialize in the management of commercial forests.

6.4 Information Acquisition and Service

The 4 FFCs that are covered in the present studies vary greatly in their respective capacities for acquiring and transferring market information/technical information to the farmers, which in turn results in noticeable differences in their efficiencies. In terms of market information acquisition, 2 major channels are available: 1) first-hand information obtained by the people in charge of the FFCs through market investigation; 2) second-hand information provided by existing buyers. The FFCs typically fall short in their capacities to launch marketing campaigns that are aimed to enhance market awareness of their products and to obtain first-hand market information. As a result, the prices of their products are highly vulnerable to the manipulation of their major buyers. As to the technical information, the FFCs normally rely on concerned governmental departments and the word-of-mouth transference among the farmers. This means enables the farmers to gain access to science/technology information at relatively lower costs.

6.5 Potentials

Supportive policies and regulatory systems offer highly optimal opportunities for the FFCs to boom. The concerned governmental departments have all pledged their further supports in technical empowerment, marketing information, marketing talents education, fine-quality seeds selection and in encouraging the development of industrial-base for advantageous products. Prioritized treatment is also promised by concerned authorities in granting harvesting quotas to the FFCs.

The majority of FFCs have their respective advantageous industries. Take for instance, the Fruits Orchards, backed by economies-of-scale and better growing techniques, enjoys very stable distributing channels and market shares. The Orange Cooperative, with its quality fruits derived from standardized approaches, has established its own brand name and trademark and therefore is relatively competitive in the market. The Camellia Cooperative, with its long history in camellia cultivation, has vast stretches of camellia forests, covering up to 16,000mu in areas.

7. Policy Recommendations

7.1 Policies

7.1.1 Special plans should be worked out to provide training for FFC managers as well as for the farmers.

The technique-centered training programs currently offered by local forestry departments are not yet enough to meet the demands of FFC members, who also have urgent demands for marketing- and management-oriented programs. In response to this, the governments are expected to work out detailed FFC development plans, highlighting capacity-building programs to equip FFC leaders with expertise in management, marketing, publicity campaign, as well as to equip the foresters with updated productive skills.

7.1.2 Active efforts should be made to solve the FFCs' financial shortfall.

Finance shortage is a common challenge that the rural areas are faced with. The FFCs rely heavily on government-subsidized programs in the construction of irrigation and warehouse facilities. It is recommended that the local governments play more constructive roles in optimizing rural financial services, for instance, by promoting forestry ownership-mortgage loans, trademark-mortgage loans, or by setting up warranty funds and risk-compensatory funds for the FFCs. It is also recommended that the economic forests should also be put under the coverage of

government subsidies for top-quality forest seeds.

7.2 Laws

According to the *Law of the People's Republic of China on Specialized Farmers Cooperatives*, the FFCs are entitled to carrying out business in the following aspects: purchasing agricultural productive materials; processing, transporting, storing and selling agricultural products; providing technical and information services related with agricultural activities. At present, while the FFCs engaged in economic forest growing and sales have been granted legal status by the local industrial and commercial authority, the collectively-owned forest farm and the household joint stockholding forest farm have not yet been. It is proposed that the legal FFC-status of the cooperative organizations engaged in afforestation, forest cultivation, and forest harvesting should be duly acknowledged, so as to promote cooperated operations among the forestry farmers and reap the benefits of economies-of-scale in developing timber-yielding forests.

7.3 Management and Regulations

Virtually all FFCs have so far established relatively complete managerial mechanism, with a *Charter* available that gives clear stipulations concerning the election of the board, the council and the supervisory committee, as well as of the accountant and teller. However, even though they basically meet the legal requirements for FFC status, they are typically rather vulnerable in internal management. Due to the absence of authoritative guidance in pricing, plus the loose link between FFC members, the prices are very susceptible to the manipulation of the purchasers. In addition, the relatively higher heterogeneity between the members also leads to inequalities in development opportunities for those in charge and those in the charge. For the above reasons, it is highly necessary for the government to strengthen supervision over the FFCs' internal management and to safeguard democratic practices within the organizations, hence strengthening the cohesive ties among the members.

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



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.

 $Website: \quad \underline{http://www.fao.org/forestry/tenure/china-reform/en/}$