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## Gender-Dimensions of Collective Forest Tenure Reform in China

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## Executive Summary

The reform of China's collectively owned forest land, began in 2008, is arguably the largest land-reform undertaking in modern times in terms of area and people affected. Under the reform, forest lands have been contracted to rural households, allowing them more independence in exercising their rights and interests in the forest lands, giving them more opportunities to improve family incomes, and creating incentives for them to cultivate, conserve, and manage forests. These lands are home to some 610 million people, many of them poor. The expanse of the collective forest lands subject to household contracting is about 2.76 billion *mu* (approximately 184 million hectares), accounting for about 60 percent of the total forest lands in China.

With urbanization, vast numbers of Chinese men have migrated to cities to work, leaving women as the predominant labor force in rural areas. Indeed, some 70 percent of China's agriculture labor force is now female. The immense scope of this change calls for a systematic examination of how China's rural women gain access to and exploit forest land and associated resources and services.

The reform was designed to unfold in two broad stages. In the first, collectively owned forest lands suitable for contracting were allocated on equal terms to each household in affected villages. Each household was to be issued a certificate for the share it held. By the end of 2014, tenure rights to more than 2.705 billion *mu* of forest lands had been established, accounting for 98 percent of the collectively owned forest lands in China. Certificates for 2.631 billion *mu*, or 95 percent of such lands, had been issued by the authorities to 90,769,400 farming households.

The ongoing second stage represents a deepening of the reform. It deals with subsidies and ecological compensation, financial services (including use of forest tenure as collateral and transfers of forest land), forest insurance, technical services and training, farmers' associations and cooperatives, and market services.

To better understand the gender dimension of the reform and to fill the gaps identified in the literature, the World Bank initiated a technical assistance study in cooperation with the National Forest Economic and Development Research Centre (FEDRC), a research institute affiliated with State Forestry Administration (SFA) of China. That study, summarized here, focuses on the gender dimensions of the second stage of the reform.

The SFA began monitoring the reform in 2009 on a trial basis and later received financial support from China's Ministry of Finance. In 2010, annual monitoring of collective forest tenure reform began, initially covering the five provinces of Liaoning, Fujian, Jiangxi, Yunnan, and Shaanxi. Gansu and Hunan provinces were added in 2011 and 2012, bringing the total to seven provinces and 3,500 households, including areas with substantial populations of ethnic minorities.

However, the monitoring had not covered the gender dimension of the reform, meaning that the gender data required to accurately reflect the full effects of the reform have been lacking. Building on the annual monitoring conducted by the FEDRC, the study reported here added gender-related investigation and analysis to obtain gender data about the current reform situation, its problems, and their causes. It also included structured interviews with rural women and group meetings with local government agencies, women's federations, and village committees.

The ultimate objective of the study is to achieve better gender-responsiveness in China's collective forest tenure reform. Specifically, this includes: (i) equality in access to and control of forest lands, as well as access to associated resources and services; (ii) women's participation and equality in decision-making concerning the conservation and utilization of forest resources; and (iii) impacts of the first two aspects on the status and well-being of women.

The World Bank has had over 30 years of successful cooperation with China in the forestry sector. Women's access to the services and resources that are the focus of the second stage of the reform will be a critical element of the World Bank's continuing reform dialogue with its Chinese partners.

## **Main findings**

The reform has brought notable socioeconomic benefits.

### ***Increased job opportunities***

Allocation of collective forest lands to rural households has created employment opportunities in planting and tending trees, forest farming, and farmers' forestry cooperatives. The reform has fostered employment for women in several ways, as demonstrated by the study. First, small and micro-forestry enterprises have boomed and have generated jobs for women. Because women are generally more patient and careful than men, they are preferred over men for the simple processing tasks undertaken by these small enterprises. Second, the need to tend the forest can create employment, since households are now responsible for looking after the forest land contracted to them. Third and most fundamentally, with so many men having migrated to cities to work for all or part of the year, women have become the chief source of labor for forestry activities; their wages are about two-thirds those of men. Most women prefer and find jobs near home or in neighboring villages, as they need to consider family care, safety, and commuting cost.

### ***Increased opportunities for entrepreneurship***

The reform has paved the way for women to start businesses, as it affords farmers, including women, more options for obtaining the loans that are so often necessary in business. It also allows farmers to acquire more forest land through tenure transfer or bidding to sustain or expand their business for better efficiency. The government has encouraged forest farming so that the income generated would help to reduce the need for logging thus protect the forest. Forest farming requires patience and care in order to reach a high output, which appears more suitable for women.

About 20 percent of women surveyed and interviewed have been involved in forest farming. The average area of forest farming for male-headed households is much greater than that for female-headed ones, mainly because the quantity and quality of labor available in the latter are lower.

### ***Increased income***

The reform has helped to increase women's income, though the share of forestry income in the total income of female-headed households is more than 10 percentage points lower than the share in male-headed households. The forest-related income of female-headed households is derived principally from forest farming, which is not the case for male-headed households. However, the total household incomes of both groups are similar.



Conventional forest activities, such as logging and selling timber, are more suitable for men, and male-headed households tend to have more laborers. These factors may explain why male-headed households derive more income from such activities and a smaller income from forest farming.

### ***Technology empowerment***

After forest land is contracted to rural households, farmers have an incentive to maximize their returns by learning about the most profitable economic trees and forest farming practices. Women have an even greater incentive because they start out with less knowledge about forest-related technology. More than 38 percent of the sample households reported to have benefited from forestry science and technological services. About 35 percent of the sample villages considered women to have more access to forestry technologies than they did before the reform.

### ***Improved family and social status for women***

With the progress of the reform, women are enjoying more opportunities to find employment or start their own business. This has greatly strengthened their ability to contribute to household incomes, giving them more say in household decisions. Enhanced status of women within the household in turn leads to higher status in society.

### **Major gender-related problems**

The study also revealed major gender-related problems.

### ***Involvement in decision making***

More than half of all decisions on important family issues and forestry activities are made by male heads of household either in isolation or after discussion with family members. About 40 percent of decisions are made jointly by husband and wife. Only about 5 percent of decisions are made solely by women.

For village issues such as deliberation on the reform plans, participants in deliberative meetings and votes are predominantly men (over 80 percent), although 60–70 percent of the sample households reported consulting other household members beforehand and debriefing them afterwards. Women's role in decision making has been, for the most part, indirect and subordinate.

As demonstrated by the study, the more women participate, the more equal they are to men in status and access to resources and services. Therefore, the level of women's participation can serve as a proxy for the level of gender equality.

### ***Signature on forest tenure certificate***

At present, only the head of household (predominantly men) is officially recognized on the forest tenure certificate. In more than 95 percent of the sample households the man's name alone appears on the certificate, and this is considered natural or not an issue. Although female heads of household are much more receptive (20 percent) than the average (a few percentage points) to the idea of women signing the certificate, some (15 percent) have chosen to put a man's name on their certificate.

It is also found that the majority of women do not really understand the meaning of the tenure certificate even if most of them have seen it or know of its existence. This could be attributed partly to the fact that their legal status as stakeholders is not clearly defined or reflected on the certificate.

### ***Effects of changes in civil status***

Although women generally were not disadvantaged in the initial allocation of forest land, those who moved to another village after her marriage, divorce, or being widowed were likely to lose their original share of forest land, either to the village or to other family members, and not receive a new one. Even when a woman's residence registration is transferred to the new village, she may not receive a new allocation for a very long time.

### ***Forestry mortgage loans***

About 10 percent of the sample households have applied for mortgage loans using their forest tenure rights; of these, only 2 percent, all male-headed, have succeeded. About 90 percent of those loan have been used for forestry activities in accordance with the loan agreement.

### ***Forestry insurance***

Forestry insurance minimizes economic loss from natural disasters. The survey reveals that about 32 percent of rural households have never heard of forest insurance, although 57 percent would want it. About 36 percent of sample households are enrolled in forest insurance, most of them (93 percent) through a collective blanket approach and paid for almost entirely by the government. Some 20 percent of households have applied for commercial insurance; about half of them actually obtained coverage. Overall, one observes little difference by gender.

### ***Forestry subsidies and ecological compensation***

About half of respondents are aware of the compensation offered in connection with forests of ecological value, a rate of awareness that is almost double that of other forest-related subsidies. Only 2–8 percent of the sample households have applied for subsidies, however, with a similarly low percentage actually obtaining them. Female heads of household have less access to the subsidies than their male counterparts.

### ***Farmers' organizations***

Among the sample households, 14 percent (evenly distributed by gender) have joined forestry cooperatives. About 58 percent of female household heads expressed a willingness to join a cooperative, higher than the rate for men. Women tend to believe that cooperatives can help them gain better access to information and services. More than 80 percent of respondents of both genders explained that they had not participated because there were not cooperatives in their vicinity.

### ***Forestry technical services***

Among the sample households, the rates of awareness of and access to forestry-related technical services were similar for both genders. Awareness was high (over 90 percent), but access was much lower (40 percent). Households have a strong demand (76 percent) for technical services. Demand is evenly distributed by gender, though female household heads show stronger interest in learning.

Hardly any training is dedicated especially for women. The training is often designed for large forest operations, with little attention paid to ordinary farmers and rural women. Most of the trainers teach in Mandarin instead of local dialects, making it difficult for the trainees to follow, especially in ethnic minority areas. Moreover, the training topics are usually determined beforehand, and women's

opinions and needs are rarely solicited.

### ***Market information and services***

The study shows that ordinary farmers, men and women alike, have great difficulty obtaining information and services related to trading forest tenure certificates and forest products. The access gap between males and females is wider here than for technical service with females having lower levels of access.

### **Key recommendations**

This study demonstrates an urgent need to take the gender dimension into consideration in formulating and implementing reform policies. The following recommendations fall into the general categories of: (i) improving the household contractual system for forest lands; (ii) improving forestry policies and services, (iii) improving the gender sensitivity of policy making, dissemination and monitoring, and (iv) other recommendations for the longer term.

#### ***Adopt multi-signatory forestry tenure certificates***

Three percent of collective forest land has yet to be allocated, and, in those areas where the reform was first implemented, contracts will soon expire and need to be renewed. It is a good time, therefore, for the forest authorities to clarify in both the forest tenure certificate and the standard contract for forest land, jointly promulgated in 2015 by the State Forestry Administration (SFA) and the Ministry of Land Resources, that all family members have the equal right. Use of the standard contract should be compulsory for renewals of the certificate.

- New forestry tenure certificates and renewals of earlier ones should make it clear that all adult members of the household are legal stakeholders of the tenure rights conferred by the certificate.
- Copies of extant certificates should be issued by forest authorities and signed by all adult family members. The copies should have the same legal validity as the original, permitting other rights holders in the household to exercise their tenure rights on the same footing as the household head.

#### ***Improve the allocation of existing collective forest land***

As a lesson learned from the first stage of the reform, villages are now allowed to retain a small amount (usually 5 percent though not prescribed by law) of their collective forest land as a reserve for new members of the village or other purposes. The following measures are recommended:

- The decision-making and voting processes used in any new allocation of land by villages should use secret ballots instead of a show of hands to allow people, especially women, to express their true preferences without feeling the pressure of conformity or the fear of being ridiculed, as has happened in the past. The forest authority and local women's federation should send observers to observe and guide such deliberations and to encourage women's participation.
- Some provinces and counties have already experimented with systems that capitalize forestry rights and issue residents shares in the collectively owned property. Such initiatives, which monetize tenure rights, can protect the rights and interests of women whose civil status changes, enabling them to retain their rights without remaining in the village or selling their forest land.
- Where tenure rights remain uncanceled and a settlement is required pursuant to a marriage or divorce, women should be able to ask women's organizations or the forestry authorities to employ

competent appraisers to evaluate the forest land in question. This has been piloted in some areas.

### ***Review and supervise village codes and the reform plans***

Forestry authorities, in conjunction with local legal authorities, should provide guidance and supervision on village codes, reform plans and other social contracts to ensure:

- That new members of the village, notably women who marry into the village, enjoy the same entitlements and rights as other villagers with respect to land allocation and voting;
- That until married women are allocated land in their new host villages, their original village should not reclaim the land previously allocated to them;
- That rules, regulations, or practices in village codes that violate the fundamental principle of gender equality and infringe women's legal rights should be immediately abolished or modified;
- That for new or renewed plans on forest land allocation, the local forest authority could link the review and amendment of these reform plans to the villages' logging quotas and other preferential policies, suspending quotas or subsidies until the necessary corrections are made.

### ***Strengthen the regulatory framework for transfer of forest tenure rights***

- The SFA should promptly promulgate rules and regulations on transfers of forest tenure. A standardized contract for transfer of forestry rights should be put in place. Transfers should not be deemed valid unless they are accompanied by signed authorizations from all adult members of the household and are jointly signed by both the head of the household and his/her spouse.
- An information disclosure system is needed, under which the authorities responsible for transfers of forestry rights are legally obligated to publicize basic information about the transaction, including the parcel, price, parties, and contract duration so as to ensure that all members of the household, especially women, have timely access to information.

### ***Establish grievance redress mechanisms for rural women***

- County governments should consider establishing dispute-resolution groups focused on women's rights (including forestry-related rights) and appoint liaisons to those groups. The groups might consist of representatives of the county women's federation, prosecutors, courts, and relevant bureaus and agencies. They should provide mediation or legal assistance free of charge to women.
- Local women's federations and other nongovernmental organizations are encouraged to set up liaisons with local forestry authorities to monitor cases where women's forestry rights are compromised or infringed and to help settle related lawsuits by providing legal aid.
- The performance in safeguarding the forestry rights of rural women should be included in evaluating the performance of the government's committee on women and children.

### ***Streamline policies on forestry mortgage loans***

- The SFA, the People's Bank of China (China's central bank), and the Banking Supervision Committee should collaborate to improve rules and regulations pertaining to mortgage loans, notably by requiring applicants to provide financial institutions with written evidence that all stakeholders in the household support the mortgage application.
- The asset appraisal mechanism for mortgaged assets should be streamlined. The minimal-profit principle should be applied in appraising applications for loans of Y 300,000 or lower, as already practiced in many areas of China.

- Terms for loans should be in line with the productive cycles of forestry activities, e.g. no shorter than three years.
- A mechanism should be explored to tie forestry mortgage loans with loan subsidies for women—for example, to subsidize the interest rate to between 3 and 5 percent so that loans are both attractive and manageable for the rural population.

#### ***Enhance the micro-credit program for women***

With regard to the anti-poverty micro-credit program for women managed by the All-China Women's Federation in cooperation with the Ministry of Finance, it is suggested:

- That governmental budgeting departments at all levels (that is, from the national People's Assembly to local People's Assembly and finance bureaus) should greatly increase the budget allocated to the micro-credit program in order to make it possible to fund more than (e.g. double or triple) only one credit per village per year and thus to improve rural women's chances of obtaining subsidized or discounted credit.
- The term of small credits for women should be extended to at least three years to take into account the characteristics of forestry activities. Other national and local funds designed to alleviate poverty, including small agricultural credits, should give more attention to women.

#### ***Optimize forest insurance policies***

Subsidized forest insurance needs to be expanded to cover more collective forests in rural areas and to better protect rural households against risk. The type of forestry assets eligible for insurance should be expanded to include economic forests and forest farming activities that are often more suitable for women and yield comparatively higher economic returns.

#### ***Reform policies for forestry subsidies***

The current selective subsidies face the challenges of fairness in selection of beneficiaries, high administration costs, and excessive discretion (allowing officials to engage in favoritism or even rent seeking), all of which jeopardize the credibility of the scheme and the government. The SFA's award initiative aims to replace the subsidies with merit-based awards. However, it is still selective and thus cannot avoid the loopholes of current subsidies. The more successful scheme of ecological compensation is more inclusive in that farmers are eligible as long as their forest land is located in a designated ecological forest. Its straightforward criteria make it easier to manage, with much lower administrative costs and less discretion by officials. These considerations underpin the following recommendations.

- Existing subsidies should be restructured from individual forestry activity to public goods and service. Such a transition would enable the current selective approach to awarding subsidies to be changed to a blanket approach as much as possible. The funds previously spent to administer and oversee complicated subsidies could be used to extend the coverage of ecological compensation, micro-credit for women, and subsidized forest insurance.
- The budgets and staffing of local technical and market services at the county and township levels should be increased to better support the forest sector, small farmers, and rural women.

#### ***Foster forestry cooperatives and women's participation***

- Bringing farmers together through the development of cooperatives will increase their ability to obtain financing on favorable terms. Forestry and financial authorities could then collaborate to assess the creditworthiness of cooperatives and villages instead of that of individual farmers.
- Women's participation in forestry cooperatives should be improved—for example, through a clear stipulation that the proportion of women among cooperative directors should be no less than 30 percent. The necessary action to bring this about can be taken by the forestry authorities at each level as a key criterion for selecting and rewarding exemplary cooperatives.

#### ***Expand technical and market services***

- Funding for technical services at the grassroots level should be increased to ensure that technical extension stations possess adequate technical capacity and resources to provide guidance in tenure management and related technical areas. Outsourcing of public services can be also explored in pursuit of better efficiency and greater expertise.
- Training should be planned in consultation with women's federations and ordinary women so that the subject matter and scheduling of training sessions meet real needs. Training materials need to be easily accessible and understood. Training should preferably be delivered by competent local experts and specialists.
- Sound evaluation systems should be put in place to assess the effectiveness of various training programs, linking of government funding to how well these programs have done in imparting to rural women the skills they need for forestry activities.

#### ***Improve the gender sensitivity of policy making, dissemination, and monitoring***

- To raise awareness of the gender dimension of the forest reform among those who make and implement forestry policy, the SFA and All-China Women's Federation should organize workshops and training; conduct joint research; and pursue other cooperative efforts.
- Major national forestry policies should be reviewed from the gender perspective before being promulgated or amended. The necessary review could be organized by the SFA using a roster of experts consisting of legal and gender scholars, leaders of women's organizations, and representatives of forestry authorities. Women's federations at all levels and other organizations devoted to the protection of women's rights should be included as key stakeholders whose opinions must be consulted before major decisions concerning the forest reform are made.
- The gender dimension should be integrated into the reform's current monitoring program in a manner consistent with the results of this study. Owing to the limits of time and funding, the present study covers a period of just two years, not long enough to capture the long-term trajectory of the reform. Because the socioeconomic and environmental impacts of the forest reform take time to become detectable, monitoring annually is not cost-effective. Instead, it could be done every two or three years. Savings should be used to expand the geographical coverage.
- Survey methods should be improved to ensure that the views and concerns of women are not overshadowed by those of the male head of household.
- Forestry policies and technical and market information should be better disseminated via the Internet, CDs, mobile phone text messaging, smartphone applications, in addition to conventional channels.

#### ***Other suggestions for the longer term***

The study ultimately points to the need to improve rural women's education and capacity and, to a lesser degree, to overcome their fear of prejudice and domestic violence—all of which require a concerted, long-term effort beyond the forestry sector. The following steps are recommended:

- The nine-year policy of compulsory education for rural girls should be effectively enforced by tying government support for rural schools to the number of students they graduate. The allowance for students in rural boarding schools should be increased so as to cut down the dropout rate, especially for girls.
- Continuing education is needed for rural women, especially those who remain illiterate. Such education could be promoted through funding for nongovernmental organizations and volunteers who offer night school or other support for women.
- Fight against domestic violence, following the passage of a national law against domestic violence that took effect in March 2016. Local women's federations should join hands with police, prosecutors, the courts, and civil affairs departments (the offices responsible for registering marriages and divorces) to set up dispute mediation mechanism for family affairs and reporting through police number of 110 to prevent and early intervene domestic violence.

# 1. Introduction

## 1.1 Background

How best to protect women's rights and improve their social status and overall welfare is an issue that has been widely discussed at the national and international levels. The Sustainable Development Goals put forward by the United Nations include achieving gender equality, empowering all women and girls, ensuring that women comprehensively and effectively participate in political, economic and decision-making at all levels and enjoy equal opportunities to enter leadership positions, and giving women equal rights to access to natural and economic resources and to enjoy ownership and rights for disposing of lands and other forms of property.

The United Nations Food and Agriculture Organization (FAO) is committed to expanding the role of women in agricultural development and supporting gender equality in forestry. According to the FAO, gender equality is a critical social consideration in forest management and related decision-making processes, playing a determining role in the success of sustainable forest management.

China attaches great importance to women's rights and interests. Its constitution has defined gender equality as a fundamental principle since 1982. In accordance with the constitution and legislation on rural land contracts, marriage, property rights, village committees, and the protection of women's rights and interests, women's rights are equal to those of men.

The Forestry Action Plan under the China's 21st Century Agenda requires that measures be taken to "eliminate the economic, legal, administrative, cultural and other barriers to women's participation in the sustainable development of forestry by recognizing the key roles played by women, especially women of ethnic minorities, in pushing the rural forestry sectors forward, and by encouraging women in rural areas to become involved in decision making, thereby ensuring that their interests are not adversely affected."

With urbanization, vast numbers of Chinese men left rural areas to seek employment in cities. According to a white paper on gender equality and women's development in China released in 2015, some 70 percent of China's agriculture labor force is now female. Women have become an indispensable force in the social and economic development of rural China.

## 1.2 Reform of the Collective Forest Tenure System

"Forest lands" are lands used to cultivate, restore, and develop forests. They include forested land, sparsely forested land, shrub land, woodland, nursery, land suitable for forest, and land used to support forestry operations. In China, lands are owned either by the state or by local entities such as villages. In the early 1950s, immediately following the founding of People's Republic of China, the land law designated large areas of forest, grassland, and mountain as state property. The remaining forest land, usually scattered and of inferior quality, was allocated to villages as collectively owned, with ownership rights held by the entire village. Today the state owns 40 percent of the China's forest lands, and sub-national entities—villages, for the most part—own the remaining 60 percent, enjoying the freedom to use, profit from, and dispose of the areas they own.



The average stocking volume<sup>1</sup> of collectively owned forests in China is about 65 percent of the country's average and 45 percent of the global average.<sup>2</sup> The low productivity can largely be explained by the fact that ownership rights in the collectively owned forests are not clearly defined. Consequently, investment in these forests has long been neglected. In addition, forest lands allocated to villages decades ago are generally of lower quality, as mentioned above, and thus less productive. Unclear and uncertain ownership rights have discouraged effective management and protection of forest resources. For instance, villagers practice deforestation while lands suitable for forest are not duly reforested or afforested.

The provinces and other areas with proportionately large collectively owned forests are also relatively poor. Therefore, healthy development of collectively owned forests and regions is critical not only for the ecological security of the land and sustainable development of the country but also for improving the livelihoods of 610 million rural Chinese<sup>3</sup> and lifting the 70 million rural poor out of poverty. The need to reform the collective forest tenure system has thus become increasingly imperative.

### **1.2.1 First Stage of the Reform**

The current wave of reform began formally in 2008 when the Chinese government issued the *Opinion on the Comprehensive Implementation of the Reform of the Collective Forest Tenure System*. The document states that to maintain the collective ownership of forest lands amounting to about 2.76 billion *mu*,<sup>4</sup> management should be contracted to farmers, allowing the farmers more independence in exercising their rights and interests in the forest lands, giving them more opportunities to improve family incomes, and creating incentives for them to cultivate, conserve, and manage forests.

The reform was designed to unfold in two broad stages. In the first, collectively owned forest lands suitable for contracting were allocated on equal terms to each household in the concerned village. The chief criteria for suitability are accessibility and potential for productivity. (Otherwise, villagers would not be interested in contracting.) For lands not suitable for contracting, a shareholding system was devised under which the land is equally distributed to each household. Each household is to be issued a certificate for the share it holds and should receive dividend if any.

The contract period for forest lands is 70 years, upon the expiry of which the contract may be renewed. Once the contractual relationship is clearly established, the government will issue certificates to the contracting households to confirm their rights and obligations with respect to the contracted forest lands. As with real estate registration certificates, the forest tenure certificates attest to the farmers' legal rights to the forest lands and the forestry resources found there. The certificates have the force of law (figure 1-1).

With the proviso that the nature and designated use of the forest lands shall remain unchanged (that is, the contracted forest lands are not to be used for real estate development for instance), farmers are free to transfer their tenure rights through lawful and voluntary means. Alternatively, they are free to develop and utilize the forest lands as investment or as capital inputs to a farmers' cooperative. The income generated from the contracted forest lands belongs to the farmers. At the same time, the

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<sup>1</sup> Stocking volume means the total volume of tree trunk per area of forest, an indicator of the quality of forest resources.

<sup>2</sup> According to 8th national forestry resources inventory, the average per unit stocking volume of collectively owned forests stands at 58.69 m<sup>3</sup>/ha, whereas that for China and the world stand respectively at 89.79 m<sup>3</sup>/ha and 131 m<sup>3</sup>/ha.

<sup>3</sup> The 2014 National Economic and Social Development Statistical Bulletin, released by the National Bureau of Statistics.

<sup>4</sup> A *mu* is a Chinese unit of area equal to 1/15 hectare.

farmers bear responsibilities for afforestation or reforestation, management, fire prevention, and pest/disease control.

**Figure 1-1 The cover and inside pages of a forest tenure certificate**



As of the end of 2014, the latest statistic available by the time of this report, tenure rights to more than 2.705 billion *mu* of forest lands had been established, accounting for 98 percent of the collectively owned forest lands in China. Certificates for 2.631 billion *mu*, or 95 percent of such lands, had been issued by the authorities to 90,769,400 farming households. Thus the first stage of the reform was completed successfully.

### 1.2.2 Second Stage of the Reform

The second stage is characterized by a comprehensive deepening of the reform. A set of supporting policies related to tax cuts, subsidies, financial, technical and marketing services was needed to help farmers build their management capacity and improve the productivity of their contracted lands. Most of the supporting policies that have been put in place are of the following types:

**Forestry subsidies and tax incentives.** Forestry subsidies mainly refer to the grants provided by the government for activities in afforestation or reforestation, typically at the range of Y 100–600 per *mu*. For example, because the cost of planting trees is greater than that of tending them, the subsidy for planting (Y 600/*mu*) is higher than that for tending (Y 100/*mu*). Applications for subsidies must be filed by household (and not by individuals) and duly examined and approved by competent forestry authorities at the county level or above before the subsidy is paid to the eligible household.

The state also offers compensation for forests designated as ecological forests<sup>5</sup> to make up for the costs households may incur owing to legal restrictions on ecological forests, such as a ban on commercial logging. The ecological forests fall into two categories: national and local level. Compensation pertaining to the former is provided from the central budget at a uniform rate of Y 15 per year per *mu*; for the latter, by the local budget at region-specific rates determined by the budgetary capacity of the local government and the loss incurred by farmers. For this reason, the rate for each region varies, with some being higher than the national rate and others lower.

In places where ecological forests are collectively owned and also contracted to farmers, the

<sup>5</sup> The term “ecological forests” refers generally to forests chiefly used to protect the environment, maintain ecological balance, preserve biodiversity, and other key functions needed for the sustainable development of people and society. Most such forests are woods and lands that provide goods and services for social and public benefit. Their establishment, protection, and management are publicly funded. There are national-level and local-level ecological forests.

compensation is paid directly to the contracting households. Farmers don't need to apply, as long as their forest lands fall in the ecological forests determined by the government through maps or Geographic Information System. If some ecological forest are in collectively owned land still retained by the village, the compensation is paid to the village, which in turn redistributes the money among households.

As to forestry-related taxes and fees, the Chinese government revoked the agricultural specialty tax in 2006 and cut the fee collected for the afforestation fund from 20 percent to less than 10 percent (and in certain cases even down to zero). This means that farmers now pay virtually no tax on their agricultural and forestry products.

**Forestry financial services.** Farmers may use their forest tenure as collateral to obtain loans from banks and other financial institutions at a rate that does not exceed 1.5 times the benchmark interest rate,<sup>6</sup> subject to the condition that the loan be used solely for forestry production. The policy is intended to protect the interest of farmers. In addition, small-scale pilots in Zhejiang, Fujian, and other provinces have explored other means of financing, such as so-called forest rights purchase and guarantee centers, and using future returns from the contracted forest lands as collateral for mortgage loans. However, no clearly defined policy yet exists to support such alternative forms of financing.

**Subsidized forest insurance.** The Chinese government initiated a pilot forest insurance program in 2009. The state financial authority has determined that forest insurance belongs to the category of agricultural insurance and provides premium subsidies to encourage insurance companies, forestry corporations, forestry cooperatives, and farmers to participate. Rates for the subsidies vary depending on whether or not the insured are ecological forests. For ecological forests, the subsidy covers 90 percent of the premium; for other forests, 55 percent.

At present, the subsidized forest insurance may be acquired by individual households, cooperative organizations, sub-village groups, villages, and forestry authorities. Generally speaking, insurance policies for ecological forests are collectively arranged by the corresponding forestry authorities at county, city or provincial level with the government paying most of the premium (so-called blanket approach). Decisions on specific premium rates and risks covered are typically made upon joint consultation between the forestry authorities and insurance companies concerned. The policies for commercial forests are initiated by each individual, household or operator on commercial term. In terms risks against, policies are of two main types: those that insure against fire and those that insure against all other risks.

**Forestry technical and market services.** This term refers chiefly to services provided to forestry operators and households by government departments, trade associations, cooperative organizations, and other service providers in connection with production activities such as planting and tending, procuring raw materials and storage, processing, and sale of forest products. The services take the form of training, technical support, marketing consultations, and assistance in the transfer of forest rights. Various training programs and workshops have been organized to empower farmers. Specialized markets for the exchange of forestry rights have also been set up in many places to offer professional services that facilitate transactions.

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6 The benchmark interest rate is the lowest interest rate charged by the People's Bank, China's central bank.

**Forest farming<sup>7</sup> activities.** Forest farming activities include activities that tap into the value of forest resources and the environment, such as intercropping and animal breeding in forests, harvesting and processing of forest products, and forest tourism. The government also encourages forest owners to raise chickens and pigs or plant herbs so as to gain extra income through non-timber products and hence increase the productivity of forest lands. For this reason, developing forest farming activities is considered an optimal way to exploit both the economic and ecological value of forests. However, in some places such activities pose risks of over-grazing or unauthorized logging to create favorable conditions for cultivating mushroom, both of which threaten water and soil conservation.

### 1.3 The Gender Issue and Previous Studies

Because the forest sector's productive cycles are longer than those for agriculture, and inter-seasonal variation is less, the reform has opened abundant opportunities for flexible employment to rural women. Moreover, with male labor in short supply in rural areas, many women have become the key players in forest reform, making themselves both the driving force for and the beneficiaries of such reforms. On the other hand, there have been cases in which women's forest rights were infringed, affecting not only social stability in rural areas, but also frustrating the achievement of the potential benefits of reform. For these reasons, the gender dimension of the reform is becoming crucially important and in need for systematic investigation.

The involvement of rural women in China's collective forest tenure reform has captured the attention of scholars in China and abroad. Previous studies have mainly focused on the following aspects:

**Women's role in forestry development.** Studies have suggested that it is important to get women involved in forestry. This is particularly true in regions with large ethnic minority populations, where women are playing unique roles in forestry practices (Long 2012). Some (such as Liu and others 2007) have argued that because women typically make up 40–50 percent of the rural labor force in developing countries, reforms cannot be considered complete or comprehensive unless women are afforded equal rights with their male counterparts. Excluding women will also dampen enthusiasm for the reform.

**Women's participation in reforms.** A study in Fujian Province (Huang and others 2007) concluded that women in rural areas are already taking the initiative in forest reforms. They gain knowledge about policies mainly by word of mouth, television, and other media. When the male member of the household was not available, some women have taken part in meetings called by the village to discuss the reform or to deliberate on land-distribution plans. Tradition-based discrimination against women still persists in some places, compromising their rights. In the reforms as in other areas, it is typically men who play the dominant roles in decision-making, field surveying, and other functions (Liu 2007).

**Factors affecting women's participation.** Research has identified the social, cultural, and legal factors that affect women's full involvement. These include the division of labor within the family, women's exposure to education, and their awareness of their rights. The marriage and inheritance systems currently prevalent in China's rural areas are a good example. These are typically male-centered and tend to undermine women's standing against men in terms of their rights to use land, manage resources, and make spending decisions. Pertinent Chinese laws often lay down basic principles without providing specifics of their application. Women in rural areas often are not fully

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<sup>7</sup> Forest farming in China refers to both farming and animal raising in the forest.

aware of their rights and ill-prepared to exercise them. As a result, even when their rights and interests with regard to forest lands are infringed, they may lack the capacity to claim compensation through legal channels (Huang 2007). Lastly, household obligations and other cultural factors often make it hard for women to become involved in the reforms and benefit fully from them (Long 2012).

**Policy suggestions to strengthen women's participation.** Researchers have proposed modifications to laws and regulations on the protection of women, including a more detailed Village Code that would better protect women's rights with respect to forestry (Huang 2007).

The studies conducted to date have shed valuable light on women's participation in the reform. However, they fall short in several respects.

- They are insufficient, especially compared with similar research in the agricultural sector. Systematic and in-depth studies remain to be done.
- They have limited coverage, are not representative, and so cannot be extrapolated on a large scale. Previous studies have typically focused on one or a few villages in a given province, thus unable to tell the overall picture.
- Study of the gender dimension of the second stage of the reform has been scarce. Thus, policy recommendations in this regard are lacking.

## 1.4 Objectives and Scope of the Study

To better understand the gender dimension of the collective forest tenure system reform and to fill the gaps identified, the World Bank initiated this technical assistance (TA) study in cooperation with the National Forest Economic and Development Research Centre (FEDRC), a research institute affiliated with State Forestry Administration (SFA) of China.

The SFA began monitoring the reform in 2009 on a trial basis and later received financial support from the Ministry of Finance. In 2010, annual monitoring of collective forest tenure reform commenced, initially covering the five provinces of Liaoning, Fujian, Jiangxi, Yunnan, and Shaanxi. Gansu and Hunan provinces were added in 2011 and 2012, bringing the total to seven provinces. *Monitoring Reports of the Collective Forest Tenure Reform* have been published annually since 2010 and submitted to SFA and other key ministries. Outcomes are summarized in the *Policymaking Reference*, an internal circular for relevant ministries and committees, including the Rural Work Leading Group of the Communist Party of China, the Ministry of Finance, and the National Development and Reform Commission. However, the monitoring does not cover the gender dimension of the reform. This means that the gender data that would be required to accurately reflect the full effects of the reform are lacking.

The World Bank has had over 30 years of successful cooperation with China in the forest sector. In addition to lending, cooperation on knowledge is exemplified by *China Forest Policy* (2010), a study that stressed the need for further cooperation focusing on the second stage of China's forest reform. In-depth, systematic studies of women's involvement in the forest reforms, their access to forest lands and to associated resources and services, as well as the challenges they face, are needed to shed new light on how to deepen the reform more effectively and on further cooperation between the World Bank and China in forestry.

In recent years, the Bank has paid increasing attention to gender in social and economic development, setting up, with other donors, the Umbrella Facility for Gender Equality (UFGE). The UFGE aims to support investigations and policy studies on gender issues so that countries can design and implement developmental policies that ensure gender equality in opportunities and benefits. This TA study is funded by the UFGE.

**The ultimate objective of this study** (hereafter referred to as “the study”) is to achieve better gender-responsiveness in China’s collective forest tenure reform. Specifically, this includes: (i) equality in access to and control of forest lands, as well as access to associated resources and services; (ii) women’s participation and equality in decision-making concerning the conservation and utilization of forest resources; and (iii) impacts of the first two aspects on the status and well-being of women.

To achieve these objectives, the study will make full use of the existing monitoring platform of the FEDRC/SFA, adding gender-related investigation and analysis to obtain gender data about the current reform situation, its problems, and their causes. Based on findings from the study, recommendations will be made on how to achieve greater gender equality in the reforms and on how to design future annual monitoring to obtain gender-adjusted data to underpin modifications to the design and implementation of the reform process.

The scope of this study is as follows:

- Spatially, the study covers 3,500 households in seven Chinese provinces representing all major geographic and economic conditions, including regions with ethnic minority groups. Sichuan Province was added in 2015, primarily for structured interviews.
- Temporally, the study extends from April 2014 through the end of 2015, thus extending over two consecutive years of annual monitoring. More details can be found in section 2.1 and Annex 1.
- Topically, the study focuses on the second stage of forestry reform, and particularly on women in rural households.



## 2. Methodology and Sample Profile

### 2.1 Methodology

The principal methodology used is field investigation conducted on the platform of the existing monitoring system. The first-hand data obtained through the field investigation are supplemented by a review of the literature and of relevant policies and regulations.

**Figure 2-1 Distribution of sample counties (indicated by dots) and provinces**



The progress of the forest tenure reform has been monitored annually since 2010 using surveys of households and villages in seven provinces—Yunnan, Fujian, Jiangxi, Hunan, Shanxi, Gansu, and Liaoning—covering all geographic regions of China, as can be seen on the map (figure 2-1). Yunnan and Gansu provinces were chosen to represent regions in south and north China respectively that have sizeable ethnic minorities.

Following the stratified random sampling method, ten counties are selected from each province for a total of 70 sample counties. Five villages are then selected from each county (350 sample villages), and ten households are selected from each village. In total, then, 3,500 sample households have been surveyed every year under the annual monitoring program. For this study, the current questionnaires for households and villages were expanded and adjusted to include a gender element and to gather information by gender.

In parallel, structured interviews were conducted among rural women. These women were chosen from the provinces and counties described above, as well as counties from Sichuan Province, added to enrich the data for this study. Overall, 154 women from 33 villages in 11 counties (or cities) in eight provinces were interviewed.

In addition, meetings and workshops were held with relevant departments of the government, such as local forestry bureaus and women's federation, and with village committees so as to better understand rural women's participation in the reform and the challenges they face. Individual case studies were prepared to illustrate women's participation, their access to various rights and resources, success stories, and lessons learned.

The annual survey is conducted during July and August of each year by faculty and students from seven universities across China. As a result, the data obtained on forestry production and output of forest land can only be for the previous year, whereas other data, such as those on the involvement and awareness of women and of pertinent policies are more current.

To ensure the quality of the survey and structured interviews, a social expert on gender issues was engaged to provide training and guidance for surveyors and interviewers. A detailed description of the methodology can be found in Annex 1.

## **2.2 Profile of Sample Households**

The study is based on two samples: (i) the sample of households surveyed under the annual monitoring program, and (ii) the sample of individuals selected for structured interviews specifically for the gender analysis of the study.

### **2.2.1 Gender Features of Households**

The gender features of the sample households are shown in table 2-1.

**Women make up nearly half of the labor force of working age.** The 3,500 sample households contain 16,024 persons, 41 percent of whom are women. The total labor force is 10,219 persons, with women accounting for 47 percent. The labor force of working-age<sup>8</sup> is 9,745 persons, with women accounting again for 47 percent. The average age of women is 38.2, older than the men sampled. Ageing is a serious problem in rural areas of China today, and 16 percent<sup>9</sup> of the total population of the sampled households is over 60 years old. One of the key features of an ageing society is an insufficient labor force. With women of working-age accounting for nearly half of the labor force in sample households, women play an important role in sustaining household livelihoods and ensure the investment of labor in forestry activities.

**The high percentage of people working in agriculture and higher for women.** Among all people who responded to the question about their profession, 5,936 chose agriculture or related. Of these, 52 percent are women, which is lower than the national average of 70 percent cited in section 1.1. This might be because the sampling in the study (explained in detail in Annex 1) tends to select more households in mountainous or hilly areas where forest land and stock is greater but it is harder for farmers (mostly men) to migrate to cities for job. In addition, the white paper is unclear about how the

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<sup>8</sup> Working age is 15–59, according to a 2013 report on the working-age labor force issued by National Bureau of Statistics.

<sup>9</sup> A nation or a region is considered an ageing society when people over 60 are at least 10 percent of the total population.



70 percent is obtained. The survey reveals that men usually are responsible for strenuous activities such as logging and transportation of wood, while women play a full role in collection of forest products and raising animals in forests.

**The education level relatively low and even lower for women.** The average number of years of education among women in the sample households is 8.1 years, 0.4 years shorter than the national average for people over 15. Thus the general education level of women in the sample households is relatively low, with more than half of women at the primary level or lower.

**Table 2-1 Profile of sample households by gender**

		Female (F)			Male (M)		
		No. of respondents	Share (%)	Average	No. of respondents	Share (%)	Average
Age (years) M=7,525 F=6,565	< 19	1,266	19	38.2	1,654	22	37.6
	20–29	1,219	19		1,245	16	
	30–39	903	14		1,043	14	
	40–49	1,138	17		1,244	16	
	50–59	1,000	15		1,170	15	
	> 60	1,039	16		1,269	17	
Education M=7,654 F=6,507	Primary or lower	3,448	53	8.1	3,163	41	8.6
	Middle school	2,070	32		2,950	39	
	High school	642	10		1,057	14	
	College	347	5		484	6	
Profession M=7,353 F=6,594	Agriculture	3,016	46		2,559	33	
	Part-time agri.	189	3		272	4	
	Part-time migrant	345	5		813	11	
	Full-time migrant	872	13		1,429	19	
	Wage earner	207	3		512	7	
	Others	1,965	30		2,068	27	
Annual income (yuan) M=6,444 F=4,905	< 10,000	3,465	71	10,445.0	3155	49	21,795.9
	10,000–20,000	709	14		1279	20	
	20,000–30,000	406	8		867	13	
	30,000–40,000	149	3		477	7	
	40,000–50,000	88	2		267	4	
	> 50,000	88	2		399	6	
Officials	Yes	101	15		585	85	

**Income is relatively low and even lower for women.** In general, women's annual income in the sample households averages Y 10,445.0, around half of men's income. More than 70 percent of women fall into the lowest income category (less than Y 10,000), considerably more than men (49 percent). The income gap between men and women reflects more the sectoral income differentials (e.g., agricultural worker versus migrant worker in cities). By nature or because of socioeconomic factors, certain sectors tend to be dominated by one or another gender.

**The proportion of female officials is low.** Some 686 officials, 85 percent of whom are men, reside in the 3,500 sample households. Most of these male officials occupy key positions such as party secretary of the village, village head, or village secretary. Most of the female officials are responsible for women's affairs (e.g. family planning). Thus rural women are underrepresented in decision making on important village issues. With less say and limited channels through which to speak, women often cannot adequately voice their concerns and demands. Their rights and interests are more vulnerable to encroachment.

The current proportion of female officials (15 percent) in sample areas falls short of government requirements. According to the *Blue Book on Women's Development*, women should have made up 21.7 percent of village committees across the country by the end of 2008. *The Women's Development Plan (2011–2020)* proposes that women's participation in village committees should be 30 percent or more, and at least 10 percent of village heads should be women.

### **2.2.2 Profile of Household Heads**

Household head is the person responsible for a rural household, a position similar to that of the legal representative of a corporation. In the monitoring program, the family member who is registered as head of household in the permanent residence book (called Hukou) is identified as the household head. In rare cases when the Hukou is unclear or unavailable, the de facto head of household is determined, i.e. the person who usually makes final decisions in family matters.

Usually the head of household can represent the household for purposes of exercising civil and legal rights and obligations without further verification or authorization. Because the surveys are normally conducted during the day when it is not possible to meet with all family members, the survey questionnaires are typically filled out by household head, assisted and verified on site by the surveyors. Moreover, the household head tends to be the family member most involved in production activities and knows the most about forest reform policies.

But having one person represent the whole family, which has not been an issue in past annual monitoring, is likely to produce biased results on gender-specific questions, particularly when the respondent is male. For example, the views of male heads of household may well be different from those of female family members on questions such as "who is better suited for planting and raising animals in forests," or "whose name should be put on the forest tenure certificate."

To tackle this practical difficulty, the organizers of the study and the surveyors requested adult female members of the household to be present during the survey. Female family members were asked to answer the same questionnaire separately as much as possible. In reality, far fewer female members came forward than male. In the future, more effort should be made in this regard, for example, by offering compensation also to female members who answer the questionnaire separately. This would

ensure greater participation of women in the survey and produce results that were less gender-biased.

For this study, the team also tried to separate household heads by gender and to analyze their responses respectively. The feedback is used for comparison and analysis. Of the 3,500 households, the heads of 171 were women (5 percent of total), and the heads of 3,203 were men (91 percent). The remaining 126 households completed the questionnaire with errors that rendered the responses invalid.

**Table 2-2 Profile of household heads by gender**

		Female (F)			Male (M)		
		No. of persons	Percentage	Average age/income	No. of persons	Percentage	Average age/income
Education	Primary or below	95	56	7.6	1,422	44	8.1
	Middle school	57	33		1,288	40	
	High school	19	11		435	14	
	College	0	0		58	2	
Profession	Agriculture	112	66	14,074.9	1,865	58	27,093.2
	Part-time agriculture	9	5		167	5	
	Part-time migrant	18	11		548	17	
	Full-time migrant	9	5		215	7	
	Wage earner	12	7		293	9	
	Others	11	6		115	4	
Income	Yuan / capita / year			14,074.9			27,093.2
Age				49.4			51.8
Officials	Yes	28			507		

Most of the female heads of household are relatively old and have no more than a primary education. Their average schooling is 0.47 years shorter than that of male household heads. More than 65 percent of the female heads are engaged in agriculture, 7 percent higher than the rate for male household heads. Their income is only half of that of male household heads (table 2-2).

## 2.3 Profile of Samples for Structured Interview

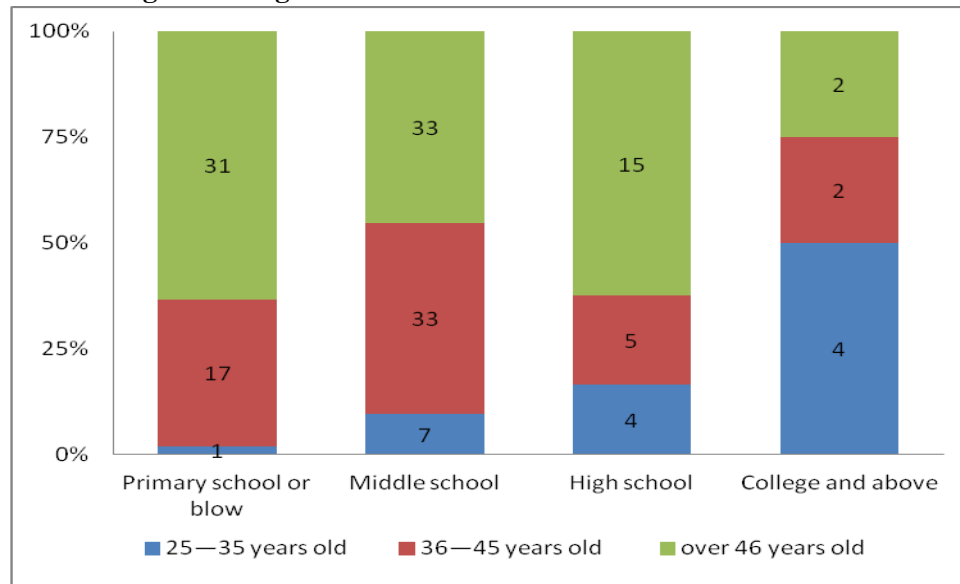
Structured interviews were conducted with 154 selected rural women. The selection criteria and methodology are described in Annex 1. Each province has around 20 women interviewed including about three female officials<sup>10</sup> and three women who run sizable forestry activities (e.g. planting or animal raising in the forest) or businesses. In total, there are 22 female officials (village heads) and 24 women who run sizable forestry activities (or so called prominent women).

Of the total, 108 (70 percent) are ordinary women—that is, women who are neither officials nor prominent in forest-related activities or businesses. They include newlyweds (33), women married out of their parent's village (50), divorced (12) and widowed (13) women. Among the 108 ordinary women, 70 (65 percent) are wholly engaged in agriculture, 28 work part-time in agriculture, and 10 work in nonagricultural sectors.

<sup>10</sup> Female officials serve on village committees.

As women's access to forest land resources is one of the major focuses of the study, attention has been paid to the impacts of changes in respondents' civil status, residence, and job conditions. It is for that reason that most of the interviewees are newly married, divorced, widowed women. Female officials and prominent women were included in the sample for purposes of comparison. All the interviewees are married; most are over the age of 46 (figure 2-2). Their education level is not high, with middle school graduates being the majority.

**Figure 2-2 Age and level of education of female interviewees**



## 3. Findings

Significant achievements have been made in women's participation in the collective forest tenure reform, and women are reaping greater benefits from the reform, but problems remain.

### 3.1 Participation of Women

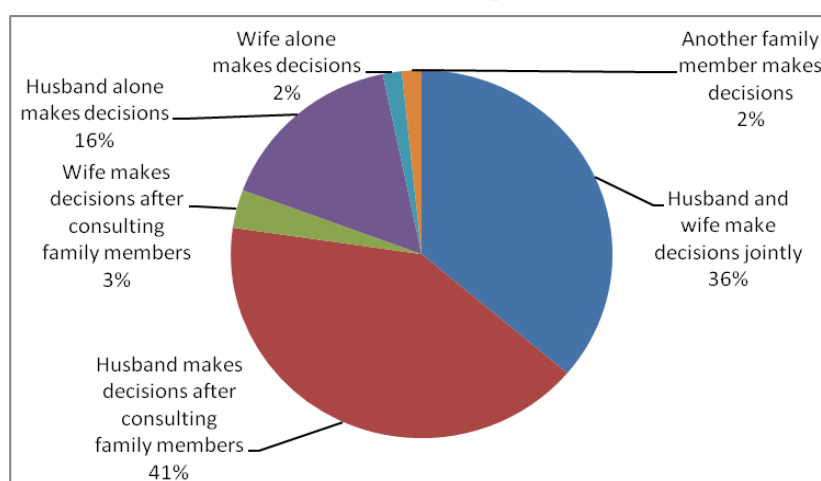
#### 3.1.1 Participation in Decision Making

Among the sample households, men are the major decision makers. Women participate less directly in making decisions about family and external matters.

##### Decision making on family issues

In more than half (57 percent) of cases, the male head of household makes the decision on important family issues, either solely (16 percent) or after consulting with family members (41 percent) (figure 3-1). In 36 percent of cases, men and women make decisions jointly. In only about 5 percent of cases do women lead decision-making.

**Figure 3-1 Decision making on important family matters**



Decision making on forestry activities shows the same pattern. Among sample households that provided feedback, women dominate decision making on forestry activities in no more than 6 percent of cases (table 3-1).

**Table 3-1 Household decision making on forestry activities**

	Select trees	Select forest farming	Sell product	Transfer forest land	Forest insurance	Apply for loan	Join coop
Husband dominates	69	67	70	69	61	70	68
Wife dominates	4	6	5	5	5	5	5
Joint	27	27	26	26	34	25	27

## Decision making on village issues

The “village issues” for the most part involve decisions on reform planning and forest land transfer. In accordance with *Law on Village Organization*, the plan for allocating and contracting collective land to households is subject to the consent of at least two-thirds of villagers or their representatives. The length of the contract under which collective forest land is allocated to households is to be determined by villagers. Village plans for the reform, resulting from democratic decision making among all villagers, provide the roadmap for contracting forest land to rural households.

The survey reveals that men play a predominant role. Women have limited direct participation in voting on village reform plans, with most women exercising their rights indirectly (table 3-2). Because women usually obtain information of the forest reform from male family members and express their opinions through them, their role in decision making is subordinate and indirect.

In most sample villages, meetings and votes held on plans, surveys, and other events related to the forest reform are usually scheduled during the spring festival or other holiday periods when men return home from their urban jobs. The timing of the meetings and votes, in other words, is designed to allow male heads of household to participate. Most surveyed women indicated that they had heard that their villages were proceeding with collective forest tenure reform but knew little about how the plans for allocation of forest lands were made.

**Table 3-2 Participation by gender in meetings and voting, %**

Participation in meeting			Consultation with family before meeting/vote				Discussion with family after		
Husband	Wife	Other	Yes	No	Sometimes	NA	Yes	No	NA
83	12	5	62	19	10	9	70	12	18

Note: NA=not answer

With the reform moving into its second stage, however, growing numbers of women are participating (box 3-1), e.g. in meetings about land transfer. This can be attributed to migration of male labor out of the villages as well as the encouragement of local Women’s Federation and Forest Bureaus.

### 3.1.2 Forest land Allocation

Under the *Law on the Contracting of Rural Land*, there are two methods of allocating collective forest land: (i) household-based contracts and (ii) allocation through bidding, auction, or open negotiation. In practice, the second method is used principally for lands unwanted by villagers, such as barren mountains, wastelands, ditches and marshes, or land too remote or difficult to access from the village. During the first stage of the reform, it was required that most collective forest land must be allocated to villagers (i.e. no reserve kept at village level) equally by household or by individuals. Only a small part (averagely 10 percent of forest land among sample villages) basically unwanted by villagers can be bid or auctioned, often to farmers with sizable forestry activities or commercial operators.

To be eligible for an allocation of forest land, individuals must be permanent residents registered in the village and members of the village economic organization. In general, the principle of “equal rights within the village” is observed, giving rural women rights equal to those of men in forest land contracting and management.

### Box 3-1 More village women are participating in forest reform

The 5th group of Yongfang Village in Jiangyou City of Sichuan Province has transferred part of its forest land to a contractor for 50 years in return for the contractor building a road in the area where the village group is located. In order to make the final decision in a fair and open manner, the village group organized a meeting on December 31, 2012. The participants were members of the Yongfang Village Committee and Communist Party branch, as well as representatives of farmers, who signed with their fingerprints to indicate agreement with the proposal. All those applying their fingerprints were men. In June 2013, the 5<sup>th</sup> group convened an assembly to discuss the question of exchanging some forest land for a paved road. During that meeting, all village group members over the age of 18 participated and applied their fingerprints. In this case, women accounted for more than 80 percent of participants. In the forest-for-road consultation, women became directly involved in voting and represented their households.



Among the 350 sample villages, 247 have allocated forest land based on the number of people in the village (headcount-based allocation). Under this system, allocations to households are not the same; households with more members get more land than smaller households.

Another 26 sample villages allocated forest land by household (household-based allocation). Under this system, forest land is distributed evenly to every household in the village. Thus each household, regardless of size, gets the same amount of forest land.

Of the remaining sample villages, 32 introduced a shareholding mechanism, with every household holding equal shares of the land. All the above three categories are essentially household-based contract. The remaining 45 sample villages did not answer this question.

Although most rural women enjoyed equal rights with men in the first stage of the reform, their rights were in some cases compromised. The design of the allocation system is such that women's legal rights to forest land are most often affected when there is a change in their civil status—that is, when they marry, divorce, or are widowed.

Some small number of rural women who married men from another village but kept their residence registration in the village of their parents may have been denied an allocation by the village on the grounds that they “married out.” But the villages to which they move after marriage may also refuse to allocate them land, claiming that they are not really members of the village because their permanent residence is elsewhere.

Other women lost out even if their registration was changed to their husband's village. Since most villages allocated their forest lands during the first stage of the reform, women who married after the

allocation will have to wait for the next round to get her piece of forest land. The most common contract length for village forest land is 20 years, but some contracts can be as long as 70 years.

According to the findings from the 350 sample villages, 84 percent of the sample villages did not reclaim the allocated forest land upon the change in civil status as long as the woman remained in the village. However, in cases where women no longer live in their original village after marriage, even if their registration remains there, their individual rights are often lost even when such rights are not reclaimed by the village because their family shares in the rights.

Many factors shape a woman's decision about whether to transfer her registration after marriage or divorce. In general, if her parent's village is better off than the one she marries into, most women do not transfer their registration.

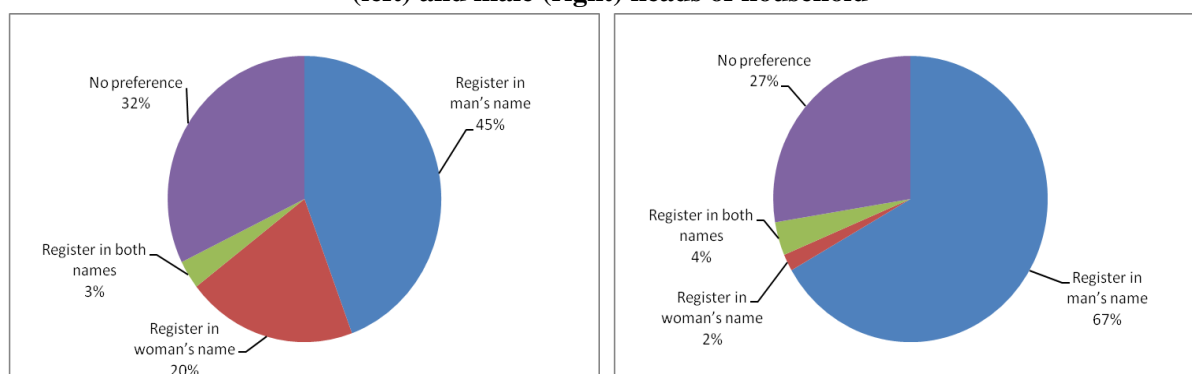
### 3.1.3 Signature on Forest Tenure Certificate

The forest tenure certificate is registered and issued by local governments at or above the county level. The holder is entitled to use of the forests and forest land designated on the certificate, and can take legal action to defend those rights. The certificate attests to the holder's rights in disputes related to forest tenure, upon sale or transfer of forest land, when applying for a logging permit, and when evaluating assets or converting assets into shares or a mortgage.

According to the survey, two-thirds of all sample households headed by a man believe that it is better to have the name of the male head of household appear on the certificate; most of the remaining third do not care whose name is used (figure 3-2, right panel). A small share like the idea of putting both the name of the head of household and his spouse. The attitudes of male and female household heads display some similarities, but, not surprisingly, female heads demonstrate higher support for having only the woman's name appear on the certificate and less support for using only the man's name.

As to the actual signature on the tenure certificate, the survey discovered that even among the 171 households headed by a woman, 15 percent had their husband or son sign the forest certificate. The certificates of male-headed households predominantly bear the signature of the man alone.

**Figure 3-2 Whose name should appear on the forest tenure certificate? Attitudes of female (left) and male (right) heads of household**



Nearly 80 percent of women surveyed and interviewed (whether household heads or not) know about or have seen the certificate. However, most women do not really understand its meaning. For example, some 30 percent of women do not think it necessary to have their names appear on the certificate and



63 percent do not care if their names appear. They believe that the forest tenure becomes a family asset when it is registered in the name of their husband.

In reality, the absence of the woman's name from the forest certificate could put their forest rights at risk. When a couple breaks up and divides property, the wife may neglect her forest land rights partly out of ignorance and partly owing to the still relatively small benefits associated with those rights. Even when the wife is aware of and wishes to invoke her rights, she may be at a disadvantage if her name does not appear on the certificate.

### 3.1.4 Involvement in Forestry Activities

According to the household survey, the number of family members involved in traditional forestry activities showed a big increase in 2014 over 2013 (table 3-3).

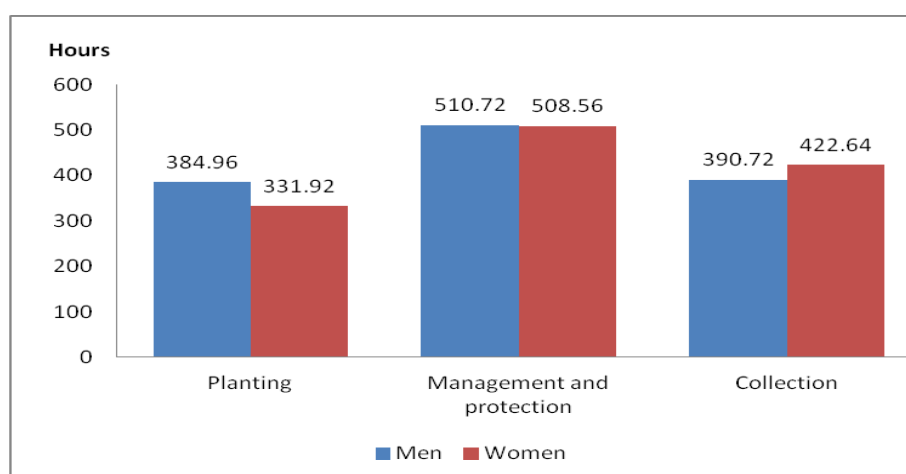
**Table 3-3 Comparison of family members' involvement in forestry activities**

	Female-headed households		Male-headed households	
	Persons in labor equivalent	Share in family labor force (%)	Persons in labor equivalent	Share in family labor force (%)
2014	43	10	768	8
2013	29	6	575	6

Note: Persons in labor equivalent: are the sum of working days per year in forestry activities reported by the samples divided by average working days per year per person stipulated by law in China (251 days). Its share is the number of persons in labor equivalent divided by total labors in the family reported by the samples.

Men spend a bit more of their time than women on traditional forestry activities, such as planting, whereas women dedicate more of their time to collection activities (figure 3-3). On the other hand, the *number* of men participating in tree planting and forest product marketing is 3.4 times and 4.3 times that of women (table 3-4). One of the main reasons for this disparity is that traditional forestry activities, such as logging and tree planting, require heavy labor, for which most women are physiologically unsuited.

**Figure 3-3 Comparison of annual time spent by the average sampled man and woman**



**Table 3-4 Participating in traditional forestry activities**

	<b>Tree planting</b>		<b>Forest product marketing</b>	
	No. of persons	Percentage of sample	No. of persons	Percentage of sample
Men	2,125	30	1,327	18
Women	622	8	309	4
Total	2,747	38	1,636	22

Note: Totally 7,140 persons answered the related questions and thus form the sample here.

### **3.1.5 Participation in the Second Stage of the Reform**

#### **Transfer of forest tenure and mortgage loan**

Only 10 percent of all households in the sample applied for mortgage loans using forest tenure as collateral, and only 2 percent obtained a loan. Of those that applied, only 16 percent were female-headed households; none of these received a loan.

Regarding the use of loans, female household heads all expressed the intention to use 100 percent of their loan on forestry activities, as compared with 50 percent of male household heads. Of the sample households that obtained a loan (all male-headed), about 90 percent were used for forestry activities.

Since the rules for forest tenure transfer are not promulgated yet and platforms for trading tenure rights have not yet been established across the country, farmers must trade their forest tenure privately, which has created a “blind zone” in forest tenure transfer. Under such circumstances, infringements of women’s forest-related rights occur “privately”.

#### **Women’s micro credit program**

As discovered during the meetings, women’s micro-credit program is another important source of financing for rural women. The All-China Women’s Federation initiated it in 2009 in cooperation with the Ministry of Finance, the Ministry of Human Resources and Social Security, and the People’s Bank of China. The goal was to help women lift themselves out of poverty. But the program has encountered quite a few problems, as discovered during the study.

The loan size is too small to meet most funding needs. The maximum is Y 50,000 and the usual range is just Y 10,000-20,000. The loans must be guaranteed by multiple households, or a salaried worker, or an official. These are requirements that are hard to meet in the countryside. For application, the village committee submits a list of eligible applicants, who are screened without any standard procedures for selection. Some interviewed women speculated that applicants who have better relationships with the leaders of the local women’s federation are more likely to obtain loans. In other words, the selection may not be based on assessment of the applicant’s need or repayment ability.

#### **Forest insurance**

The survey found that 32 percent of the sample households had never heard of forest insurance, but 57 percent expressed a desire to have it. About 36 percent of sample households are enrolled in forest insurance, almost entirely (93 percent) through the blanket approach, with an average coverage of Y 437 per mu at a premium of Y 1.12 per mu, paid almost entirely by the government. Some 20

percent of households have applied for commercial insurance; about half of applicants obtained a policy. Comprehensive forest insurance against all natural disasters accounts for 70 percent of all policies issued among sample households and insurance against only fire, 29 percent. Differences by gender are insignificant.

### Forestry-related subsidies and compensation

More than two-thirds of the sample households have not heard about the forestry subsidy. Their awareness of ecological compensation policies is better (table 3-5). Compared with male household heads, female household heads show lower awareness of policies related to forestry subsidies and compensation. Consequently, their application for various forestry subsidies is even lower (2 percent), with successful rate also at 2 percent. The situation for ecological compensation is much better for both genders and farmers don't need to apply, as explained in 1.2.2.

**Table 3-5 Knowledge of household heads concerning subsidies and compensation ,%**

	Subsidy on machinery		Subsidy on seedlings		Subsidy on planting		Subsidy on tending		Ecological compensation	
	F	M	F	M	F	M	F	M	F	M
Aware	19	24	2	33	24	34	23	26	47	55
Unaware	81	76	77	67	75	66	76	74	52	45
Applied	2	2	2	8	2	6	2	3	NA	NA
Received	2	1	2	7	2	5	2	2	12	18

Note: As not every person answered the question fully, percentages may not add up to 100 percent.

### Forestry cooperatives

Among the sample households, 14 percent (equally distributed by gender) have joined forestry cooperatives. The figure is even lower (less than 7 percent) for households headed by women. About 58 percent of female household heads expressed a willingness to join a cooperative, a higher rate than for male household heads. More than 80 percent of household heads of both genders cited the absence of local cooperatives as their reason for not having participated in.

### Technical service

Among the sample households, rates of awareness of and access to technical services are similar for both genders. Awareness is high (over 90 percent), but access is low (about 40 percent have it). Households have a strong demand (76 percent) for technical services, with not much difference between genders. The survey findings illustrate the gap between demand and the availability and accessibility of technical services.

Currently farmers have three ways to gain access to technical service: lectures and workshops (50 percent); brochures and other materials (25 percent); and field instruction (25 percent). Content is evenly divided among forest tending, planting and husbandry, and improved variety selection and forest management.

The amount of technical training presently available is far from sufficient, and its content is often unsystematic. Training activities usually take place at fixed times, which are easily missed by women

because of family obligations. Almost no training is designed especially for women. Available training workshops tend to be for large forest operations, with little attention paid to ordinary farmers and rural women. Most of the technical specialists provide the training in Mandarin rather than in local dialects, making it difficult for trainees to follow, especially in ethnic minority areas. Moreover, the training topics are usually decided beforehand, with women's opinions and needs rarely solicited.

### **Market services**

The beneficiaries of existing limited platforms—such as forest tenure trade networks, online forest product markets, and auction sites—are primarily enterprises and a few wealthy households, leaving the ordinary households out. Ordinary households have difficulty accessing market information. Over 90 percent of surveyed women have no idea about forest tenure trade centers; only a small number of educated women have used them. Men's access to market information is equally poor.

Almost all women surveyed expressed the desire for timely market information on planting and husbandry. What most interests them is to know what to plant and raise. They often invest blindly in the same varieties or species as others do, without knowing where to sell the output and whether it will be profitable. The situation for men is similar. For both genders, the gap for market services is even greater than it is for technical services.

### **Forest farming activities**

Among the sample, 594 households (17 percent) are involved in forest farming activities on 10 percent of the forest lands belonging to the sample households. Of this 10 percent, nearly all (97 percent) belongs to male-headed households. The average size of forest farming activities run by female-headed household (9.2 mu) is much smaller than that run by male-headed household (57.6 mu), mainly because the quantity and quality of labor of the former are weaker.

On the other hand, the average annual income per capita of forest farming activities by female-headed households is Y 22,570, which is *higher* than that of male-headed households (Y 18,980). Forest farming activities seem to be good options for women who are interested in them.

Of the 109 female household heads that provided feedback on the topic, 27 percent reported a lack of investment, 22 percent were not sure if their forest land was suitable for forest farming activities, 16 percent knew no technologies, 12 percent complained about shortage of labor, 12 percent were concerned about the lack of good options, and the rest feared difficulty in marketing their products.

## **3.2 Social and Economic Impacts of the Reform**

The reform has had multifaceted effects on rural households by creating employment opportunities, enhancing farmers' capacity for entrepreneurship, increasing incomes, and building technical capacity. In particular, it has significantly promoted women's status both in the family and in society. Overall, more than 89 percent of female heads of household are satisfied with the reform. More than 60 percent of the sample villages have positive attitudes about women's role in the reform.

### **3.2.1 Creating Employment**

Contracting collective forest land to households has created opportunities for employment in planting, tending, forest farming, and forestry cooperatives. As small forestry enterprises have boomed since

the reform, they have generated jobs for women. Because women are generally more patient and careful than men—and because they command lower wages—they are more valued for the simple processing tasks undertaken by small enterprises (box 3-2). Moreover, the need for forest resource management and protection brought about by the reform has create employment, since households are now responsible for looking after the forest land contracted to them.

**Box 3-2 The experience of an agro-forestry business in hiring rural women**

Ms. Qu, the general manager of Hunan Sanxiang Agro-Forestry Co., Ltd., shared her experience in hiring and training rural women. “Women can play a bigger role in planting compared with men because jobs like weeding (either manually or using herbicide) requires patience and care. And women are better at spraying pesticides, which does not require a lot of physical effort. Therefore, wages for men and women are the same in our company. We pay attention to workers’ education, particularly for female workers who have strong family consciousness but less work experience. We offer training courses for women two or three times a week, starting with literacy, because some of them even do not know how to write! Regarding teamwork and punctuality, women do not come to work on the dot; some arrive early and others later. We bring them together by providing meals in the morning, at noon, and in the evening, which encourages them to come on time. In this way, teamwork and punctuality are being improved.”

Women’s employment shows the following features. Most newly employed women found jobs with households having sizable plantings or husbandry, either in their own village or in a neighboring one. Women typically must consider family care, safety, and the cost of commuting. More than 90 percent of woman expressed a preference for a work place within 30 minutes’ walk from home. Women tend to accept both daily and monthly remuneration, as long as they can have flexibility, which is especially important for those with heavier family obligations.

The survey reveals that wages paid to women are about 67 percent of those paid to men in Jiangxi, Fujian, and Shaanxi Province even for identical work. Women are usually engaged in simple jobs such as fruit picking, tending trees, and processing primary forest products.

Almost all the rural areas with forest lands have set up ranger teams that include women. However, being a ranger requires physical strength and long working hours that are especially intense during certain periods and thus are not always suitable for women. Most women who as forest rangers do so out of necessity because too many men have migrated to urban areas. This phenomenon has challenged the traditional gender division of labor.

### **3.2.2 Starting a Business**

With more options of obtaining finance (e.g. through forest tenure mortgage) needed for any business, the reform has also provided more opportunities for women to start their own businesses. The government has encouraged farmers to develop forest farming activities so that the income generated will offset the potential profit from logging and thus help to conserve the forest. Forest farming activities require patience and care in order to reach a high output level. Women are able to fulfill both these requirements. About 20 percent of the women surveyed and interviewed have been involved in forest farming activities.

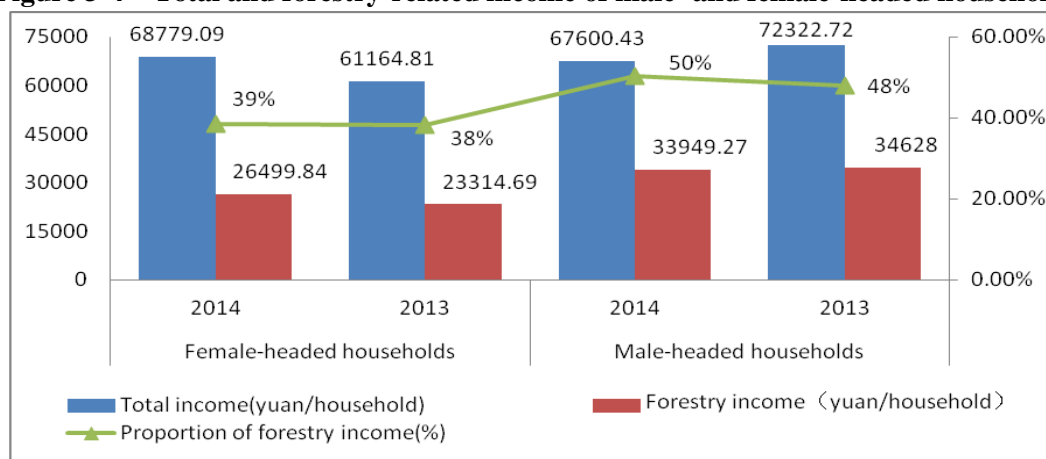
### Box 3-3 Women starts up small and micro forestry business

A woman named Huang living in Qianchang Township of Chongyi County in Jiangxi Province set up a bamboo chopsticks factory to take advantage of local bamboo resources. The factory employs 17 people, 12 of whom are women. All of the women working in the factory are from Huang's village or from nearby villages. They earn wages in the factory while taking care of their families. Because of severe market competition, the factory is not profiting well, but it provides employment for women. This type of small and micro forestry enterprise can have significant social impact and deserves more support.

### 3.2.3 Generating Income

The reform has helped to increase women's income (figure 3-4).

**Figure 3-4 Total and forestry-related income of male- and female-headed households**

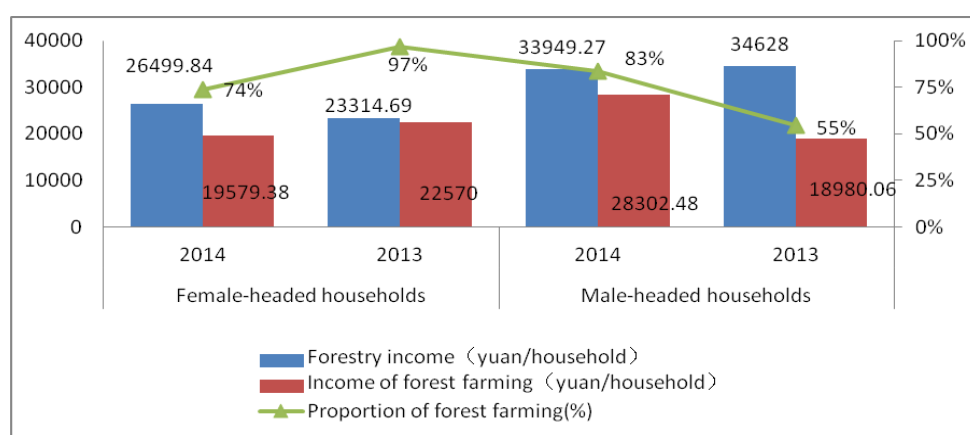


The share of forestry income in the total income of female-headed households is more than 10 percentage points lower than that of male-headed households for both 2013 and 2014. However, the total household incomes of both groups are roughly similar. In 2014, the average income of female-headed households was even slightly higher than that of male-headed households.

Income from forest farming activities deserves separate analysis because it accounts for an important share of household forestry income for the sample households (figure 3-5). Among households that already engage in forest farming activities, almost all (97 percent) of the forestry income of female-headed household come from forest farming activities in 2013, decreasing to 74 percent in 2014. These shares were much higher than for male-headed households (55 percent in 2013 and 83 percent in 2014).

Rural women have greatly increased the income they derive from forestry-related property and wages, in addition to that derived from activities of exploiting their own allocation of forest land. A woman named Yang who lives in Dali Village in Luoping County of Yunnan Province leased her forest land of more than 10 mu to an entrepreneur to plant walnut seedlings. She herself worked in the nursery to help recruit laborers to do the weeding and tending. She earns more than Y 10,000 from the lease and more than Y 30,000 in wages each year. Her income is much higher than it was before the reform.

**Figure 3-5 Income from forest and forest farming activities**



### 3.2.4 Capacity Building

Most male heads of household believe that they already have some knowledge of practical forestry techniques and thus care less than women do about further education, though they acknowledge that it might be better to learn more. However, women realize they have limited education and know even less about forestry techniques, so they want to take advantage of every training opportunity.

With the reform accelerating the establishment of a more market-based forestry service system and with the dissemination of forestry technologies among the rural population, rural women now have more opportunities to participate in various forestry training. The survey shows that 35 percent of sample villages reported that women have more access to forestry technologies than before. In addition, farmers now have greater incentives to seek support in order to cultivate the most profitable trees and forest farming activities. Many have learned by doing and become knowledgeable about forestry technology, sometimes serving as experts in their villages.

### 3.2.5 Social Status Improvement

About 41 percent of sample villages reported an increase after the reform in opportunities for women to participate in village activities, through which women can gradually overcome their sense of inferiority and dependence, build up market awareness, and develop new ways of thinking. Through the reform, more women have dared to be pioneers, to be active and enterprising.

A household is like a cell of the society and a miniature of social relationships. Hence, women's status in the household mirrors their status in the society. After the collective forest land is contracted to households, women enjoy more employment opportunities, raising their ability to generate income for the family. This helps to improve their economic status in the household and to command more respect from family members. Higher status in the family has positive effects on status in the society.

The findings of the study indicate that the more women participate, the more equal they are to men in status and in access to resources, services and benefits. Therefore, the level of women's participation could serve as a proxy for the level of gender equality.

## **4. Analysis**

In the course of China's reform of collective forest tenure, various factors have affected women's rights and participation. These range from the design and implementation of policies to traditional culture and social norms.

### **4.1 Design of Policies**

#### **4.1.1 Change in Civil Status of Women**

In China's current legal system, a rural household is normally considered as a unit for determining entitlements. The system strengthens the financial rights of the family as a whole but tends to ignore the personal entitlements of the individual members. When a change takes place in the relationship among the family members, the individual's rights and interests may be placed at risk as the household's rights and interests take priority over those of the individual. As discussed in previous chapters, the land allocated to a household normally will not increase even if the household has grown and vice versa. Combined with a policy design that is household-based in most cases, this practice could seriously affect the forest tenure rights of rural women whose civil status changes.

If a marriage breaks up, the ex-husband usually refuses to transfer the part of the forest land that ought to go to the ex-wife in the division of family property. More often than not, women tend not to insist on their rights or waive them, sometimes out of ignorance. Women often do not consider forest land as property, mainly because its value to date has been low. However, even when women realize the land's potential value, they may waive their rights out of concern for their children's feelings or fear of provoking domestic violence from their ex-husband.

Nonetheless, the study confirmed that solutions have been explored in various places. In Kuandian County, Liaoning Province, with the help of the women's federation there, women engage an assessment agency to evaluate the part of forest land she is entitled to and require the ex-husband to pay cash compensation for the loss of her part of the tenure. Yet in reality, as the chairperson of the women's federation admitted, few women demand the assessment for the reasons mentioned above.

#### **4.1.2 Registration of Forest Tenure Certificates**

As entitlements are determined by household, the forest tenure certificate is registered in the name of the head of household, which is usually a man in rural areas. On the one hand, most reform policies related to rural area are thus also household based. On the other hand, existing laws and regulations do not include provisions for having the names of both husband and wife or of all the adult family members appear on the certificate to explicitly confirm individual's rights. These combined have sometimes affected rural women's rights, as the study found.

With a large number of men living outside the village as migrant workers, many women have become the actual users of the certificate. Nevertheless, they find it difficult or impossible to use it as collateral for loans or other purposes because of the inconsistency between the name on the certificate and that of the actual user. In some cases, male heads of household sell the family's trees or transfer forest land at their discretion, without consulting their wives. In other cases, they use the forest tenure as collateral for loans at their discretion and spend the money for purposes not related to the family.



### 4.1.3 Transfer of Forest Tenure

No law or regulation yet governs transfers of forest tenure. The lack of clear rules from the top makes it difficult for local forestry authorities to identify infringements of women's rights, nor can they intervene effectively. The SFA has promulgated a *Circular on Further Strengthening Forest Tenure Management* which is a guidance document without much operational detail. Although the circular does identify certain problems that have disadvantaged farmers (e.g. transfers that are too large, transfer contracts that are too long, and transfer prices that are too low), it says nothing about the problem of infringing women's forest-related rights and interests.

### 4.1.4 Forestry Financial Services

According to the study, women are experiencing several problems in obtaining financial services in connection with their household's forest land.

**Policies lack gender perspective and differential provisions.** The high cost of assessments and transactions, high interest rates, and complicated procedures make it difficult for farmers, particularly women, to use forest tenure to obtain loans. For example, the female owner of a fir plantation in Luoping County, Yunnan Province would have to pay nearly Y 10,000 yuan for a forest resource assessment and spend several months going through complicated procedures with various agencies to obtain a loan of just Y 300,000. The situation is the same for men, but men tend to have more extensive social networks and thus better chances than women to find the guarantors required.

**Cultural bias against borrowing.** In rural China particularly in the interior, most farmers are still reluctant to borrow money. During the interviews, some farmers mentioned that seeking a loan would cause them to lose face because it would suggest they had not done well enough on their own.

**Women's micro-credit is difficult to obtain and utilize.** The program was originally designed mainly for agriculture activities such as cropping and animal raising most of which are on annual basis. However, the one-year term of this credit is too short for forestry since a forest production cycle takes at least six years. Often only one loan per year is available for each village, but there are several applicants in the village normally. The banks are reluctant to expand micro credit due to its high transaction cost and workload in processing relative to the potential profit, indicating a need for additional incentive from the government. Though being managed by women's federation, the application needs to be reviewed also by local social security bureau and finance bureau before it is appraised and verified by participating banks. This explains the lengthy process and procedure as well as the high transaction cost.

### 4.1.5 Forest Insurance

The study indicates that forest farming activities are promising for rural women. Some women make investments of several million yuan in seedling nurseries or plantations of economic trees. However, forest farming activities and special economic trees (also called cash trees)<sup>11</sup> are not yet covered by forest insurance for several reasons.

First, so-called policy forest insurance (subsidized insurance) has focused on expanding the insured area, raising the level of subsidies for the premium, and offering more comprehensive coverage for

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<sup>11</sup> Special economic trees produce fruits, edible oils, beverages, seasonings, industrial and medicinal raw materials.

ecological forests. Second, and more importantly, some government leaders believe that forest farming activities do not represent significant public goods and therefore should not receive insurance subsidies. Third, forest farming activities in some regions are not managed properly, resulting in over farming, overgrazing, soil erosion, and damage to the environment.

#### **4.1.6 Forestry Subsidies and Ecological Compensation**

Forestry subsidies in China are still too low in terms of their total amount. For example, the subsidy for tree planting accounts on average for about 20 percent of the actual costs. Most subsidy rates were set around 2010 though modified in 2014 by the SFA and the Ministry of Finance. With inflation and soaring production and input costs, the effect of various subsidies has been weakened.

Most forestry subsidies are paid by area, regardless of how well that area is managed. Checking the actual performance of individual farmers on their forest land is a formidable task and can easily raises questions of fairness and objectivity. In fact, this is the challenge of any selective subsidy, which leaves space for those who administer it to manipulate selection criteria and misuse their discretion for favoritism or even rent seeking, both of which harm the credibility of the government.

Forest farming activities are not covered by subsidies for the same reasons they are not eligible for subsidized insurance. The only exception is planting of Chinese herbs in forest, which the government wants to encourage for their high value and return to farmers, although growing of many Chinese herbs has been proved to likely deplete soil and water faster than other forest farming crops.

The more successful ecological compensation also illustrates that subsidies with a flat rate and blanket approach can be effective at a much lower administrative cost, as well as being less trouble for farmers (who need not apply). The cost saving on processing and supervising can be used to increase coverage and level, benefiting both farmers and the environment. If the currently ineffective and very complicated forestry subsidies (e.g. some of which apply only to state-owned forest land) were phased out gradually, the resources saved could be used to enhance public services in forestry, such as technical extension and market services at grassroots level. This might better support the forest sector as a whole and the subsectors for which the subsidies were originally intended.

#### **4.1.7 Mechanism for Redress of Grievances**

As mentioned in 3.1.2, some villages' land-allocation practices violate national regulations and could result in infringement of women's rights under the reform. However, apart from the local women's federation, women have nowhere to file their complaints. As found during the interviews, a few male heads of household sold the forest land and trees owned by the family at low prices to repay personal debts or meet personal needs without informing other family members or over their wives' objections. Most of the women have no choice other than to contain their resentment.

### **4.2 Implementation of Policies**

The study reveals that there are also problems with the implementation of reform policies.

#### **4.2.1 Policy Dissemination**

As revealed by the survey and interviews, farmers' awareness and knowledge of the reform policies are not monitored. Nor are they taken into account in evaluations of the performance of officials. Thus,

dissemination by local governments is often nominal or just for show without attention to actual results. In many regions, policy dissemination takes the form of official announcement and briefings or training for forestry staff, not much aimed at ordinary farmers, let alone women.

Sometimes, policy dissemination is hindered for other reasons, such as overly high premiums of insurance. After forestry staff at the township had doubts about the value of forest insurance, believing it to be of little help for farmers, they ceased to actively disseminate the policy.

#### **4.2.2 Actual Application of Policies**

The reform policies are well intended. However, their actual application still have some problems. Some forest bureaus only want to give the forest-related loans to state-owned or larger forest farms and big operations by households or companies, as these entities are easier to manage and produce results faster than small farmers, enabling the government to claim success more quickly than they would otherwise be able to. Moreover, the government hoped for the trickling-down effect for small farmers through supporting these big operations. However, the actual results years later are not satisfactory, which has led to re-thinking of the government's functions and approaches.

Meanwhile, forest bureau officials lack adequate understanding or even awareness of the gender issue. During a meeting held in one sample county, the local forest official opened the conversation by saying that it did not seem necessary to consider the issue of women participation in the forest tenure reform as a separate topic: "This issue has never been discussed or thought of... I should say women nowadays may benefit more than men." With further discussions, the officials recalled instances in which they dealt with some issues that affected women's rights and interests, and gradually gained some awareness of the gender dimensions of the reform. Comparatively speaking, forestry officials at the grassroots level are more aware of the gender issue than those at higher levels.

#### **4.2.3 Technical Service**

Forestry technical services have been under-funded and under-staffed in China, especially at the grassroots level. At the township forestry stations, which are branches of the county forest bureau, one staff member is typically responsible for everything—pest management, fire prevention, seedling management, and technical training. In terms of geographical area, one township station usually has to manage more than ten "administrative villages" each of which can cover up to a dozen natural villages. The technicians at the township are thus too busy to do all the work. Moreover, they have limited technical capacity and often cannot solve the problems encountered by the farmers.

Reforming the government's technical extension service is still at an early stage in China. Public procurement of services by the government has not yet been introduced in the forestry sector, so gaps in the service the government provides largely remain unfilled. Owing to insufficient market competition, the charges for private technical service are too high for farmers to bear.

There is lack of a comprehensive training mechanism and the failure to evaluate the effectiveness of training. In many places, forestry officials submit plans in order to obtain training funds without caring much about the substance and results of training. This is mainly because their performance training budget allocation are not evaluated against output and effect of the training activities, i.e. not result-based, due to the relative ease to measure input than result.

#### 4.2.4 Market Services and Organization of Farmers

The findings suggest that farmers' access to market information and services is equally poor for both men and women. The gap between farmers' demand and the supply of accessible market services is greater than the corresponding gap for technical service. The reasons behind the low level of organization of China's farmers are complicated and beyond the scope of this gender study. But the reasons for the gender differences in cooperative membership are generally the same as those for women's lower participation in and access to various resources and services.

#### 4.3 Factors of Women's Education and Family Burden

The findings of the study suggest that part of the reason for gender inequality in the forest tenure reform lies in women's education and family burdens.

**Rural women have less education than men do**, as described in chapter 2. Some rural families take their children out of school in order to put them to work. However, because women are seen as inferior to men, girls may be pulled out sooner. Many girls do not even finish the nine years of compulsory education required by Chinese law. As a result, few rural women have enough education to benefit from forest-related technical training. In an interview, a forest station technician reported that during one training session some women could not understand anything of his presentation on mixing forestry chemicals in certain ratios. Other cases (see box 3-2) indicate that quite a few rural women are still illiterate.

By comparison, women who have had more than a middle school education participated more actively in the survey and interviews. These women have a stronger capacity for learning and demonstrate greater knowledge of forestry reform policies. Many of them have a bright and extroverted personality, converse easily, and are ready to accept new things.

**Rural women are constrained by housework and family care.** According to the survey results, every family in the sample has at least one member who has left the village to become a migrant worker, and most of these are men. Women who are left behind assume full responsibilities for family care and farm work. Tied up with housework, rural women have a very small circle of life. Some middle-aged women have never traveled farther than the county seat. After having children, they stay at home and have few chances to experience new things. Over time, rural women may become more conservative, responding slowly to new things and new policies. When the interviewer mentioned forest policies such as insurance and subsidies, some women had no idea what these were and showed no interest in finding out. Only when the interviewer provided more explanations did they start to nod, but they did not go so far as to ask how they might benefit from the policies.

#### 4.4 Traditional Culture and Social Norms

Decision-making power is the essential element of one's status in a family or in society. As shown by the survey results, traditional culture and social norms affect how women conduct themselves with regard to forest-related decision-making.

First, often the men in a household represent the family to attend the meetings at which decisions on reform plans are made. In some regions, if female family members attend meetings, they are ridiculed by other villagers who believe the women's family is making a mistake or that the women are being too aggressive and not behaving as a woman should. In this way, women's equal access to information about the forest reform is undermined, which in turn affects their ability to participate effectively in decision-making.



**Box 4- 1 Rural women seldom participate directly in voting on the forest reform plan**

As shown in the picture on the left, the village leaders sitting on the podium are all men, and the villager representatives in the voting are men too. Interviews show that when a couple is at home, the wife normally will not propose to go to such a meeting and will spontaneously let the husband attend it on behalf of the family. Only when the man is away will the wife attend the meeting. However, due to inexperience with such meetings or her limited knowledge, she does not know how to effectively exercise her right for the decision. Therefore, she basically follows suit in expressing her opinion about the decision.

According to the norm that still prevails in rural China, the husband is in charge of external matters and the wife looks after the house. This tradition requires women to assume the heavy responsibilities of housekeeping, raising children, and taking care of the elderly and the sick, but discourages them from engaging in economic production or social affairs. Over time, most rural women come to think of themselves as unable to take part in economic and social affairs. As they gradually lose their interest in matters outside the home, they forgo opportunities that otherwise might be available to them.

For example, when women are asked if they are willing to run for leadership positions, most expressed little interest. When asked for their views about current female village leaders, many women had a low opinion of them. Most women believe that it is the responsibility of men to take care of external matters and that women are not in a position even to comment on such matters.

## 5. Conclusions and Suggestions

The following major conclusions and suggestions can be drawn from the study.

### 5.1 Major Conclusions

#### 5.1.1 Social-economic Impacts

The reform has brought about notable socio-economic benefits:

**Increased job opportunities.** The reform has fostered employment for women in several ways, as demonstrated by the study. First, small and micro-forestry enterprises have boomed and have generated jobs for women. Because women are generally more patient and careful than men, they are preferred over men for the simple processing tasks undertaken by these small enterprises. Second, the need to tend the forest can create employment, since households are now responsible for looking after the forest land contracted to them. Third and more fundamentally, with many men having migrated to cities to work for all or part of the year, women have become the chief source of labor for forestry activities and their wages are about two-thirds those of men. Most women prefer and find jobs near home or in neighboring villages, as they need to consider family care, safety and commuting cost.

**Increased opportunities for entrepreneurship.** The reform has paved the way for women to start businesses, as it affords farmers, including women, more options for obtaining the loans that are so often necessary in business. It also allows farmers to acquire more forest land through tenure transfer or bidding to sustain or expand their business for better efficiency. The government has encouraged forest farming so that the income generated would help to reduce the need to logging thus protect the forest. Forest farming requires patience and care in order to reach a high output, which appears more suitable for women. About 20 percent of women surveyed have been involved in forest farming. The average area of forest farming for male-headed households is much greater than for female-headed ones, mainly because the quantity and quality of labor available in the latter are lower.

**Increased income.** The reform has helped to increase women's income, though the share of forestry income in the total income of female-headed households is more than 10 percentage points lower than the share in male-headed households. The forest-related income of female-headed households is derived principally from forest farming, which is not the case for male-headed households. However, the total household incomes of both groups are similar.

Conventional forest activities, such as logging and selling timber, are more suitable for men, and male-headed households tend to have more laborers. These factors may explain why male-headed household derive more income from such activities and a smaller income from forest farming.

**Technology empowerment.** After forest land is contracted to rural households, farmers have an incentive to maximize their returns by learning about the most profitable economic trees and forest farming practices. Women have an even greater incentive because they start out with less knowledge about forest-related technology. More than 38 percent of the sample households reported to have benefited from forestry science and technological services. About 35 percent of the sample villages considered women to have more access to forestry technologies than they did before the reform.

**Improved family and social status for women.** With the progress of the reform, women are enjoying more opportunities to find employment or start their own business. This has greatly strengthened their ability to contribute to household incomes, giving them more say in household decisions. Enhanced status of women in the household in turn leads to higher status in society.

### **5.1.2 Major Gender-Related Problems**

Despite the achievement, there are problems as revealed by the study.

**Involvement in decision making.** More than half of all decisions on important family issues and forestry activities are made by male heads of household either in isolation or after discussion with family members. About 40 percent of decisions are made jointly by husband and wife. Only about 5 percent of decisions are made solely by women.

For village issues such as deliberation on the reform plans, participants in deliberative meetings and votes are predominantly men (over 80 percent), although 60–70 percent of the sample households reported consulting other household members beforehand and debriefing them afterwards. Women's role in decision making has been, for the most part, indirect and subordinate.

As demonstrated by the study, the more women participate, the more equal they are to men in status and access to resources, services, and benefits. Therefore, the level of women's participation can serve as a proxy for the level of gender equality.

**Signature on forest tenure certificate.** At present, only the head of household (predominantly men) is officially recognized on the forest tenure certificate. In more than 95 percent of the sample households the man's name alone appears on the certificate, and this is considered natural or not an issue. Although female heads of household are much more receptive (at 20 percent) than the average (a few percentage points) to the idea of women signing the certificate, some such households (15 percent) have chosen to put a man's name on their certificate.

It is also found that the majority of women do not really understand the meaning of the tenure certificate even if most of them have seen it or know of its existence. This could be attributed partly to the fact that their legal status as stakeholders is not clearly defined or reflected on the certificate.

**Effects of changes in civil status.** Although women generally were not disadvantaged in the initial allocation of forest land, those who moved to another village after her marriage, divorce, or being widowed were likely to lose their original share of forest land, either to the village or to other family members, and not receive a new one. Even when a woman's residence registration is transferred to the new village, she may not receive a new allocation for a very long time.

**Forestry mortgage loans.** About 10 percent of the sample households have applied for mortgage loans using their forest tenure rights; of these, only 2 percent, all male-headed, have succeeded. About 90 percent have been used for forestry activities in accordance with the loan agreement.

**Forestry insurance.** Forestry insurance minimizes economic loss from natural disasters. The survey reveals that about 32 percent of rural households have never heard of forest insurance, although 57 percent would want it. About 36 percent of sample households are enrolled in forest insurance, most of them (93 percent) through a collective blanket approach and paid for almost entirely by the government. Some 20 percent of households have applied for commercial insurance; about half of

them actually obtained coverage. Overall, one observes little difference by gender.

**Forestry subsidies and ecological compensation.** About half of respondents are aware of the compensation offered in connection with forests of ecological value, a rate of awareness that is almost double that of other forest-related subsidies. Only 2–8 percent of the sample households have applied for subsidies, however, with a similarly low percentage actually obtaining them. Female heads of household have less access to these subsidies than their male counterparts.

**Farmers' organizations.** Among the sample households, 14 percent (evenly distributed by gender) have joined forestry cooperatives. About 58 percent of female household heads expressed a willingness to join a cooperative, higher than the rate for men. Women tend to believe that cooperatives can help them gain better access to information and services. More than 80 percent of respondents of both genders explained that they had not participated in cooperatives because there were not cooperatives in their vicinity.

**Forestry technical services.** Among the sample households, the rates of awareness of and access to forestry-related technical services was similar for both genders. Awareness was high (over 90 percent), but access was much lower (about 40 percent). Households have a strong demand (76 percent) for technical services. Demand is evenly distributed by gender, though female household heads show stronger interest in learning.

Hardly any training is dedicated especially for women. The training is often designed for large forest operations, with little attention paid to ordinary farmers and rural women. Most of the trainers teach in Mandarin instead of local dialects, making it difficult for the trainees to follow, especially in ethnic minority areas. Moreover, the training topics are usually determined beforehand, and women's opinions and needs are rarely solicited.

**Market information and services.** The study shows that ordinary farmers, men and women alike, have great difficulty obtaining information and services related to trading forest tenure certificates and forest products. The access gap is wider here than for technical service.

## 5.2 Key Recommendations

This study demonstrates an urgent need to take the gender dimension into consideration in formulating and implementing reform policies.

### 5.2.1 Improve the Household Contractual System for Forest Lands

**Adopt multi-signatory forestry tenure certificates.** Three percent of collective forest land has yet to be allocated, and, in those areas where the reform was first implemented, contracts will soon expire and need to be renewed. It is a good time, therefore, for the forest authorities to Clarify in both the forest tenure certificate and the standard contract for forest land, jointly promulgated in 2015 by the SFA and the Ministry of Land Resources, that all family members have the equal right. Use of the standard contract should be compulsory for renewals of the certificate.

- New forestry tenure certificates and renewals of earlier ones should make it clear that all adult members of the household are legal stakeholders of the tenure rights conferred by the certificate.
- Copies of extant certificates should be issued by forest authorities and signed by all adult family



members. The copies should have the same legal validity as the original, permitting other rights holders in the household to exercise their tenure rights on the same footing as the household head.

**Improve the allocation of existing collective forest land.** As a lesson learned from the first stage of the reform, villages are now allowed to retain a small amount of their collective forest land as a reserve for new members of the village or other purposes. The reserve is usually around 5 percent, though this is not prescribed by law or regulation. The following measures are recommended:

- The decision-making and voting processes used in any new allocation of land by villages should use secret ballots instead of a show of hands to allow people, especially women, to express their true preferences without feeling the pressure of conformity or the fear of being ridiculed, as has happened in the past. The forest authority and local women's federation should send observers to observe and guide such deliberations and to encourage women's participation.
- Some provinces and counties have already experimented with systems that capitalize forestry rights and issue residents shares in the collectively owned property. Such initiatives, which monetize tenure rights, can protect the rights and interests of women whose civil status changes, enabling them to retain their rights without remaining in the village or selling their forest land.
- Where tenure rights remain uncanceled and a settlement is required pursuant to a marriage or divorce, women should be able to ask women's organizations or forestry authorities to employ competent appraisers to evaluate the forest land in question, as has been piloted in some areas.

**Review and supervise village codes and the reform plans.** Forestry authorities, in conjunction with local legal authorities, should provide guidance and supervision on village codes (filed at township governments according to relevant law), the reform plans (filed at county forest bureaus presently) and other social contracts into which villagers have entered to ensure:

- That new members of the village, notably women who marry into the village, enjoy the same entitlements and rights as other villagers with respect to land allocation and voting;
- That until married women are allocated land in their new host villages, their original village should not reclaim the land previously allocated to them;
- That relevant regulations or practices in village codes that violate the principle of gender equality and infringe women's legal rights should be immediately abolished or modified;
- That for new or renewed plans on forest land allocation, the local forest authority could link the review and amendment of these reform plans to the villages' logging quotas and other preferential policies, suspending quotas or subsidies until the necessary corrections are made.

### **5.2.2 Improve Forestry Policies and Services**

For policies and services especially those based on economic incentive and market mechanism, the WB and other international financial institutions have substantial knowledge and global experience that can be tapped into when implementing the related recommendations.

#### **Strengthen the regulatory framework for transfer of forest tenure rights**

- The SFA should promptly promulgate rules and regulations on transfers of forest tenure. A standardized contract for transfer of forestry rights should be put in place. Transfers should not be deemed valid unless they are accompanied by signed authorizations from all adult members of the household and are jointly signed by both the head of the household and his/her spouse.

- An information disclosure system is needed, under which the authorities responsible for transfers of forestry rights are legally obligated to publicize basic information about the transaction, including the parcel, price, parties, and contract duration so as to ensure that all members of the household, especially women, have timely access to information.

### **Streamline policies on forestry mortgage loans**

- The State Forestry Administration, the People's Bank of China (China's central bank), and the Banking Supervision Committee should collaborate to improve rules and regulations pertaining to mortgage loans, notably by requiring applicants to provide financial institutions with written evidence that all stakeholders in the household support the mortgage application.
- The asset appraisal mechanism for mortgaged assets should be streamlined. The minimal-profit principle should be applied in appraising applications for loans of Y 300,000 or lower, as already practiced in many areas of China.
- Terms for loans should be in line with the productive cycles of forestry activities—that is, no shorter than three years.
- A mechanism should be explored to tie forestry mortgage loans with loan subsidies for women—for example, to subsidize the interest rate to between 3 and 5 percent so that loans are both attractive and manageable for the rural population.

### **Improve the micro-credit program for women**

With regard to the anti-poverty micro-credit program for women managed by the All-China Women's Federation in cooperation with the Ministry of Finance, it is suggested:

- That governmental budgeting authorities at all levels (that is, from the national People's Assembly to local People's Assembly and finance bureaus) should greatly increase the budget allocated to the micro-credit program in order to make it possible to fund more than (e.g. double or triple) only one credit per village per year and thus to improve rural women's chances of obtaining subsidized or discounted credit.
- The term of small credits for women should be extended to at least three years to take into account the characteristics of forestry activities. Other national and local funds designed to alleviate poverty, including small agricultural credits, should give more attention to women.

### **Optimize forest insurance policies**

Subsidized forest insurance needs to be expanded to cover more collective forests in rural areas and to better protect rural households against risk. The type of forestry assets eligible for insurance should be expanded to include economic trees and forest farming activities that are often more suitable for women and yield comparatively higher economic returns.

### **Reform policies for forestry subsidies**

The current selective subsidies face the challenges of fairness in selection of beneficiaries, high administration costs, and excessive discretion (allowing officials to engage in favoritism or even rent seeking), all of which could jeopardize the credibility of the scheme and the government. The SFA's award initiative aims to replace the subsidies with merit-based awards. However, it is still selective and thus cannot avoid the loopholes of current subsidies. The more successful scheme of ecological compensation is more inclusive in that farmers are eligible as long as their forest land is located in a

designated ecological forest. Its straightforward criteria make it easier to manage, with much lower administrative costs and less discretion by officials. These considerations underpin the following recommendations.

- Existing forest subsidies should be gradually restructured away from individual forestry activity to public goods and service. Such a transition would enable the selective approach to awarding subsidies to be changed to a blanket approach as much as possible. The funds previously spent to administer and oversee complicated subsidies could be used to extend the coverage of ecological compensation, micro-credit for women, and subsidized forest insurance.
- The budgets/subsidies for and staffing of local technical and market services at the county and township levels should be increased to better support the forest sector, small farmers, and rural women while reducing administration cost.

### **Foster forestry cooperatives and women's participation**

- Bringing farmers together through the development of cooperatives will increase their ability to obtain financing on favorable terms. Forestry and financial authorities could then collaborate to assess the creditworthiness of cooperatives and villages instead of that of individual farmers.
- Women's participation in forestry cooperatives should be improved—for example, through a clear stipulation that the proportion of women among cooperative directors should be no less than 30 percent. The necessary action to bring this about can be taken by the forestry authorities at each level as a key criterion for selecting and rewarding exemplary cooperatives.

### **Expand technical and market services**

- Funding for technical services at the grassroots level should be increased to ensure that technical extension stations possess adequate technical capacity and resources to provide guidance in tenure management and related technical areas. Outsourcing of public services can be also explored in pursuit of better efficiency and greater expertise.
- Training should be planned in consultation with women's federations and ordinary women so that the subject matter and scheduling of training sessions meet real needs. Training materials need to be easily accessible and understood. Training should preferably be delivered by competent local experts and specialists.
- Sound evaluation systems should be put in place to assess the effectiveness of various training programs, linking of government funding to how well these programs have done in imparting to rural women the skills they need for forestry activities.

### **Establish grievance redress mechanisms for rural women**

- County governments should consider establishing dispute-resolution groups focused on women's rights (including forestry-related rights) and appoint liaisons to those groups. The groups might consist of representatives of the county women's federation, prosecutors, courts and other relevant bureaus and agencies. They should provide mediation or legal assistance free of charge to women.
- Local women's federations and other nongovernmental organizations are encouraged to set up liaisons with local forestry and judicial authorities to monitor and report or even bring litigation on cases where women's forestry rights are compromised or infringed and to help

settle related lawsuits by providing legal aid.

- The performance in safeguarding the forestry rights of rural women should be included in evaluating the performance of the government's committee on women and children.

### **5.2.3 Improve the Gender Sensitivity of Policy Making, Dissemination, and Monitoring**

- To raise awareness of the gender dimension of the forest reform among those who make and implement forestry policy, the SFA and All-China Women's Federation should organize workshops and training; conduct joint research; and pursue other cooperative efforts.
- Major national forestry policies should be reviewed from the gender perspective before being promulgated or amended. The necessary review could be organized by the SFA using a roster of experts consisting of legal and gender scholars, leaders of women's organizations, and representatives of forestry authorities. Women's federations at all levels and other organizations devoted to the protection of women's rights should be included as key stakeholders whose opinions must be consulted before major decisions concerning the forest reform are made.
- The gender dimension should be integrated into the reform's current monitoring program in a manner consistent with the results of this study. The study covers a period of just two years, not long enough to capture the long-term trajectory of the reform. Because the socioeconomic and environmental impacts of the forest reform take time to become detectable, monitoring should be done every two or three years. Savings should be used to expand the geographical coverage.
- Survey methods should be improved to ensure that the views and concerns of women in the household are not overshadowed by those of the male head of household.
- Forestry policies, technical and market information should be better disseminated via the Internet, CDs, mobile phone text messaging, smartphone applications and conventional channels.

## **5.3 Other Recommendations**

The study ultimately points to the need to improve rural women's education and capacity and, to a lesser degree, to overcome their fear of prejudice and domestic violence—all of which require a concerted, long-term effort beyond the forestry sector. The followings are recommended:

- The nine-year compulsory education for rural girls should be effectively enforced by tying government support for rural schools to the number of students they graduate. The allowance for students in rural boarding schools should be increased so as to cut down the dropout rate, especially for girls.
- Continuing education is needed for rural women, especially those who remain illiterate. Such education could be promoted through funding for nongovernmental organizations and volunteers who offer night school or other support for women.
- Fight against domestic violence, following the passage of a national law against domestic violence that took effect in March 2016, local women's federations should join hands with police, prosecutors, the courts, and civil affairs departments (the offices responsible for registering marriages and divorces) to set up dispute mediation mechanism for family affairs and reporting through the police number of 110 to prevent and early intervene domestic violence.

## Annex 1 Methodology for the study

The specific research methods are described below.

### A.1 Literature Review

In order to fill research gaps while avoiding duplication of efforts, literature review was conducted covering relevant laws, stipulations and policies, as well as academic publications and research papers so as to get a whole picture of up-to-date research activities, findings and analysis.

### A.2 Questionnaire Survey

The existing *Monitoring Program of Collective Forest Tenure System Reform* (hereinafter “the Monitoring Program”) has been conducted mainly through questionnaire survey led by the FEDRC and carried out by teachers and students of universities during summer vacations of 2014 and 2015 in sample provinces. As a result, only data of the previous year (i.e. by 2014) can be collected for some parts of the survey, such as investment on forestry, outputs of forest land. Other data are the latest (i.e. by 2015), such as participation and awareness of relevant policies.

#### Selection of sample

Typical sampling methodology was employed. The first step is to identify provinces. According to the zoning in the *Eleventh Five-Year Plan of National Economic and Social Development of the People's Republic of China*, one to two provinces which started the reform earlier are picked up from the East Zone, Northeast Zone, Central Zone, Southwest Zone and Northwest Zone respectively. Altogether seven provinces were selected as sample provinces, see the table below.

**Table A-1 Sample provinces and zones they are located**

Zone	All Province in China	Sample Province
East	Beijing, Tianjin, Hebei, Shanghai, Jiangsu, Zhejiang, Fujian, Shandong, Guangdong, Hainan	Fujian
Northeast	Liaoning, Jilin, Heilongjiang	Liaoning
Central	Shanxi, Anhui, Jiangxi, Henan, Hubei, Hunan	Jiangxi, Hunan
Southwest	Sichuan, Guizhou, Yunnan, Tibet, Guangxi	Yunnan
Northwest	Shaanxi, Gansu, Qinghai, Ningxia, Xinjiang, Inner Mongolia	Shaanxi, Gansu

The second step is to select sample counties. According to geological location, each sampled province are further divided into sub-zones, in which sample counties are identified through stratified random sampling method according to forest resource and social economic conditions. In this way, ten counties are selected in each sample province, totaling 70 sample countries. More specifically:

- If forest area or stock of a sub-zone accounts for over 30 percent of that of the province, all counties in this sub-zone are to be divided as “high”, “middle” and “low” stratum according to economic status, and then two counties in each stratum are randomly selected. Thus, totally six counties are identified from this sub-zone.
- If forest area or stock of a sub-zone is 20-30 percent in the province, all counties in this sub-zone are grouped into “high” and “low” stratum according to economic status, and then one county in

each stratum is randomly selected. Thus, totally two counties are identified from this sub-zone.

- If forest area or stock of a sub-zone is 10-20 percent of that of the province, two counties are randomly selected among all the counties in this sub-zone.
- If forest area or stock of a sub-zone is below 10 percent of the province, no county is sampled from this sub-zone.

In the third step, all the towns and townships in a selected sample county are ranked from high to low in the order of economic development. Following the isometric drawing method, five towns or townships are randomly selected. Then one sample village is selected randomly in each of the sampled town or township, thus altogether 350 sample villages.

In the fourth step, ten sample households are selected from each sample village through symmetric isometric method<sup>12</sup> by going through the household registration name list. Therefore, totally 3500 households are selected as samples for annual monitoring.

All the sample provinces, counties, villages and households are revisited each year unless special circumstances occur, such as the single family no longer exists due to the death of the person, or the couple has migrated to other places.

### **Design of questionnaire**

There are two sets of questionnaires used in the annual survey under the Monitoring Program:

- Village questionnaire, is filled out by village committee of 350 sample villages. The questions being added to the original questionnaire include the allocation of forest land to women, impacts of women on forestry activities, village committee's observation and views on women's role and status in the reform, etc.
- Household questionnaire, is filled out by 3500 sample households with the assistance of surveyors. The questions added to the original questionnaire include participation of women in the planning of forest reform; the influence of women in voting; the fairness of women in access to forest land; women's involvement in decision making related to forestry activities; their participation in and contribution to forestry activities, and the impacts on women, etc.

In 2015, apart from the additional gender related questions mentioned above, all original questions in the questionnaires were modified by gender as much as possible to maximize the information that could be obtained by gender. With feedback from the surveyors in the field after 2015, the questionnaires were further revised to integrate gender dimension for future monitoring. It is now being considered by SFA to be adopted in regular monitoring in the future, see Annex 2.

### **A.3 Structured Interview and Case Studies**

To get cases for in-depth analysis, structured interviews with women were organized. It is a one-to-one interview on a topic or a range of topics following a pre-developed outline, although the interview itself can touch upon broader areas than the outline. The purpose of outline is twofold: to specify basic information that must be collected and to ensure better comparability.

Though most interviewers for the study are female, some women are reluctant to face a stranger

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<sup>12</sup> Symmetric isometric method is a way of sampling. All the units in the population should be placed in a sequence and a sampling interval is defined according to the sample size. Starting from a unit randomly selected, one unit is selected at the end of each sampling interval.

interviewer alone in a closed environment, such as inside a room. Thus one-to-more interviews was also tried where the interviewer has a discussion with two or more than two women at the same time. In this way, the feedback on a question can be collected from a number of women at one time. It can also minimize disturbance of women's daily life and housework. The venues of the interviews are also chosen at the preference of the interviewees, e.g. in the office of village committees or in front of women's houses. In regions with ethnic minorities, the interviewers and surveyors have relied on villagers who can understand mandarin to help with their work.

### **Selection of interviewees**

The interviewees for the structured interview are selected primarily based on age and types of women. More specifically, the sample households under the Monitoring Program are screened to select women with age between 25-55 years old (women of this age range are familiar with household daily work and forestry activities) to form the sampling pool. The structured interviews are not limited to the provinces and counties under the Monitoring Program. Pingwu County of Sichuan Province and Yueyang County of Hunan Province were added in 2015, which has enriched the sample size.

Forest bureaus in seven sample provinces and chief surveyors made recommendations on one or two counties they considered representative in the reform for interviews and meetings. After discussion with local forest bureau of the recommended county taking into account the practicality, two to three villages are recommended. The county officials would give a brief to the village heads who convene women selected as interviewees. The women finally selected for structured interview should represent major types of social status and civil status, and within the above mentioned age range. Altogether, 154 women in 33 villages of 11 counties from eight provinces were covered in the structured interview, more than the originally planned 140 women. Among them, cases were collected for in-depth analysis particularly on successful stories to analyze women's participation, their access to various rights, experience, lessons learned as well as possible causes and factors.

### **Training of interviewers and surveyors**

Most of the interviewers have social science background and experiences in similar researches. None the less, a domestic gender experts has been engaged to provide training, guidance and review of the drafts. The training materials have been compiled into handbook which has been distributed to chief surveyors, i.e. teachers in charge of the Monitoring Program surveys in the seven universities (Beijing Forestry University, Gansu Agricultural University, Northwest Agricultural and Forestry University, Central South University of Forestry and Technology, Southwest Forestry University, Jiangxi Agricultural University, and Fujian Agricultural and Forestry University). The teachers served as trainers for their students who conduct the survey during summer led by their teachers.

### **A.4 Meetings**

Meetings/workshops have been held with relevant departments of the government including forest bureau and Women's Federation at national and local level as well as village committees to understand the general status of rural women's participation in the reform. Usually the outlines for discussion were provided to participants beforehand, though the exchanges during the meetings are not restricted to it. At least one county per province for meetings, totally 12 meetings were held in both sample counties and non-sample counties, in addition to those at provincial level.

## Annex 2 Gender Indicators Proposed for Future Monitoring

In order to track and analyze the impacts of the collective forest tenure reform on rural women in the long term, three main indicators on women's involvement in decision-making, implementation and effects of the reform are proposed to be incorporated into the monitoring system of the reform.

Indicators should be concise to maximize information obtained by a minimum set of questions. The indicators for three major dimensions of the collective forest tenure reform are listed in the following table. In order to obtain information on these indicators, specific parameters listed will be embedded into the survey questionnaire for future regular monitoring of the reform.

**Table A- 2 Indicators proposed for future monitoring**

Aspect	Indicators	Specific Parameters
Women's participation in decision-making	Participation in planning and design of forest reform programs	No. of women involved in voting on village forest land transfer
		No. of women involved in setting up forestry organizations
		No. of women involved in forest land adjustment in village
		Women's proposals and their adoption
Women's participation in implementation and their access	Participation in activities and access to services related to the forest reform	Percentage of women participating in afforestation
		Percentage of women in forest management and conservation
		Percentage of women in forest products gathering
		Percentage of women in forest products selling
		Percentage of women in forest farming activities
		Percentage of women using forest tenure mortgage for loan
		Percentage of women in forestry related cooperatives
		Percentage of women using forest insurance
Impacts of women's participation	Benefits after participation by women	Women's contribution in labor and knowledge
		Percentage of women receiving technical service and training
		Percentage women with access to market information
		No. and Percentage of women as cooperative's council member
		Percentage of women in village committee
		Women's income from forest and other activities



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