

# FOREST TENURE REFORM IN CHINA

*China is increasingly putting forest management rights into the hands of its citizens. Jintao Xu and Juha Siikamäki describe the environmental and economic results.*

Despite rapid economic growth and a substantial rate of poverty alleviation, daunting socioeconomic issues remain in modern China. The income gap between the country's urban and rural populations is widening, and the associated social tension periodically occupies the spotlights of national and international media. Addressing this disparity is a major objective of China's policymakers. The Chinese government has focused its approach on easing land conflicts, frequently the root cause of social unrest, by giving farmers stronger tenure rights—that is, more control to manage and use the land.

Current and past attempts at land tenure reform give farmers rights over commercial

forests, seeking to boost domestic timber production and sustain China's forests while correcting urban–rural economic disparities. These reforms represent a massive institutional change in how China manages its forest resources, moving away from a collective system to a dramatically more decentralized regime.

After a false start in the early 1980s, Chinese forest tenure reform began again in 2003, when the government of Fujian, the largest province of collective forests, initiated changes encouraging household tenure. These reforms progressed rapidly, and by 2006 practically all villages in the province were under household forest management. By the end of 2007, an





additional 13 provinces had announced new policies on collective forest tenure. By 2010, the number of provinces with policies encouraging forest tenure reform had increased to 20.

These drastic changes could have major implications for the use and management of forests in China. Because forests grow and mature slowly, however, the full impacts may take a long time to play out.

### **Assessing the Impact of China's Forest Tenure Reform**

To take stock of the changes under way, the Peking University Environmental Economics Program has conducted two rounds of village- and household-level surveys in 8

provinces, covering a total sample of 49 counties, 141 townships, 288 villages, and 3,100 households. The results of the first-round survey, conducted in 2006–2007, are supported by a second-round survey (undertaken in summer 2011) of the same villages and households, which enabled our team to even better capture the dynamic changes induced by forest tenure reform. The surveys collected data on farmer livelihoods, forest land markets, rural labor markets, rural credit systems, and farmer association activities.

China is a large country with considerable geographic variation in both natural conditions and governance structures. The implementation of forest tenure reform also

reflects this heterogeneity. We identified five broad categories: individual, collective, village cluster, partnership, and outsider contract (see “Types of Forest Tenure” below). We found substantial differences in outcomes based on the type of forest tenure. Two categories of management—individual and partnership—provide most of the direct benefits to farmers. Village leaders are the direct beneficiaries of the other main tenure categories.

## Outcomes

Analysis of the survey data reveals that forest tenure reform already is causing

changes in basic natural resource use and management decisions. The evidence indicates that forest tenure reform has coincided with changes in farmers’ attitudes, increased harvests, afforestation, and rising income from forestry activities.

## Farmers’ Perceptions

Associated with each tenure type is a bundle of rights—such as transferability, inheritance, harvest, and production rights—specified in the land contracts. Inclusion of such concrete rights in the different tenure types is a significant improvement over the first, failed round

### Types of Forest Tenure

**Individual forest tenure.** Most of China’s commercial forests are under some form of individual household management. In the surveyed provinces, forests in this category accounted for 65 percent of forest area in 2000. As a result of tenure reform, that share had risen to 70 percent by 2010. Some forests in this category are private plots with rights similar to private ownership and comparatively stable tenure rights. This category also includes plots managed by individual farmer households within the village. The farmer has either a special contract or a rental agreement. In the current round of reforms, a common element in individual contracts is the issuance of forest certificates and the allowance of long contract periods on the scale of 30 to 70 years. Different tenure types under this broad class are now converging toward the private-plot system.

**Collective and village cluster forest tenure.** These represent the main forms of communally managed forests. Collective forestland is managed directly by an administrative village council or under the framework of a collective farm supervised by a village council. Village cluster forests are managed by a cluster of families living in the same neighborhood. Forestland managed by village clusters is similar to collectively managed forests, but at a smaller scale. The prevalence of these two structures has decreased from 30 percent in 2000 to 20 percent in 2010.

**Partnership forestland.** Forests managed by a group of farmers formed on a voluntary basis constitute a relatively small but growing tenure category. In 2010, partnership forestland covered, on average, 6 percent of forest area, up from 2 percent in 2000.

**Outsider management contract.** These forests are contracted out for use and management by individuals and organizations residing outside the villages. They currently comprise about 4 percent of China’s forests.

of tenure reform and may give cause for optimism this time around.

Our research found that the percentage of farmers who believe they can transfer rights within and outside their village is surprisingly high and appears to be growing substantially over time. Farmers also feel more free to determine how the land is used. For individually managed forests, for example, in the first-round survey in 2006,

effectively reducing public access to collective forests. Collectively managed forests, therefore, may not benefit a large portion of the community members.

#### Timber Harvests

While the statistical analyses are still under way, we can see that annual timber harvests in villages increased substantially during 2000–2006, especially in the provinces of

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35 percent of farmers perceived that they had the autonomous right to convert forestland into farmland. In the second-round survey in 2010, 53 percent thought they had such rights. Additionally, the majority of farmers under individual management tenure feel they have the right to choose the tree species planted, as well as manage non-timber forest products, such as mushrooms and herbs.

The opposite is true for farmers operating under village cluster management. Farmers' perceptions about the right to manage non-timber forest products under this type of tenure are particularly intriguing. These products are fundamentally important to households, and people used to assume that access to them was an inherent right of any community member. However, the survey indicated that people in collectively managed villages perceived their access to be more restricted, down from 89 percent in 2006 to 55 percent in 2010. The reason might be that it has become more legitimate, or at least common, for collective leaders to pursue exclusive returns from land remaining under their supervision—

Fujian, Liaoning, and Yunnan. The second-round survey data show remarkable increases in Fujian, Jiangxi, Anhui, Hunan, and Liaoning, whereas Zhejiang and Yunnan observed harvest decline. By and large, the increased harvest seemed to be highly correlated with individualization.

#### Afforestation

Another seemingly robust trend associated with individualization is increased afforestation by farmers. According to the survey results, afforestation in general rose during the period 2000–2006, and it increased most in provinces where individual management dominated. Afforestation also increased under other tenure types, indicating that other factors—most likely market growth—played a role in the recent afforestation boom. Regardless of the cause, the significant increase in afforestation is a good sign for the long-term sustainability of forest management in China.

#### Income

Generally, the share of household income from forestry activities has increased along

with forest tenure reform. While we cannot attribute all growth to reform, we believe it played an important role. Future research will be devoted to better understanding tenure reform's contribution to increases in farmers' income. Committed efforts should also be made to investigate the impacts on equity of forest tenure reform.

### **Regulatory Challenges**

By creating many small forest landowners in a relatively short period, forest tenure reform in China now poses regulatory challenges for forest authorities. For example, it will become increasingly difficult to implement a logging quota because farmers are receiving more revenue from harvesting. More generally, as forestland management has been decentralized, the cost of regulation has increased.

Forest tenure reform will be a longer process than some expected. Many newly created or rising tenure types, such as partnerships and outsider contracts, are

intermittent arrangements. When socioeconomic factors change, relationships among partners change, and some of these partners will undoubtedly separate. As contract periods expire, outsider contracts will have to be renegotiated and some forestland may be returned to the original communities. All these changes will require redistribution of management rights. Other factors, such as widespread forestland conflicts, also can cause shifts in the tenure system.

China's forest tenure reform coincides with a general trend of forestry decentralization in a large number of developing countries facing rural unrest and conflict. Its uniqueness lies in its goal of establishing individual rather than community-based management systems, which are promoted in many other countries. In a sense, China's reform is a step ahead of this mainstream movement and will provide lessons for countries searching for alternative models in the future. ●

