

China's boom in household management of forests

J. Liu and J. Yuan

Through ongoing forest tenure reform, most collective forests in rural China have come under the management of individual households.



Households intercrop fast-growing trees such as *Populus sp.* with agricultural crops, and are free to harvest the trees in most cases

Rural households have an important stake in China's forests. According to Chinese legislation, land is owned by the State or by collectives. However, under a rural land use system created in the early 1980s – the household responsibility system – rights to use the land have been allocated to individual farmer households for periods of up to 30 to 70 years. Thus tens of millions of hectares of collective forests have been allocated to the management of individual households. These household forests have great importance in terms of production, protection and poverty alleviation. This article provides a historic overview of household forestry in China and outlines some recent aspects of tenure reform that have influenced it, with examples from different topographical environments.

HERITAGE OF HOUSEHOLD FORESTRY

Before 1949, most forests in China were owned by households and were managed for either commercial or subsistence production of timber, fuelwood, food

and medicines. They were also appreciated for their cultural and spiritual values. The intensively managed forests were as valuable as traditional farming systems.

The period from 1949 to the early 1980s was characterized by nationalization and collectivization. Private lands were expropriated, and within a relatively short period in the 1950s the commune movement had eliminated private landownership, including ownership of forest lands. As a consequence, there were then two kinds of forest landownership: 58 percent of forest land was owned and managed by collective farms, administrative villages or production groups, and 42 percent was owned by the State. In the 1960s, the window was opened slightly to allow households the use rights to small parcels of forest in mountainous regions, but this liberalization ended with the beginning of the Cultural Revolution in 1966.

In the early 1980s, however, China initiated rural policy reforms oriented to the free market, which strongly influenced forest tenure. Encouraged by successful

Liu Jinlong is Participatory Forestry Specialist at the Sustainable Forestry Research Centre, Chinese Academy of Forestry.

Yuan Juanwen is a Ph.D. candidate at Wageningen University and Research Centre, Wageningen, the Netherlands.

experiences with the household responsibility system on agricultural land, the Chinese Government decided to conduct similar reforms of the collective forest tenure system. In March 1981, the “three-fix” policy (“fix forest land-ownership, fix mountain use rights, fix responsibility for forest management”) shifted the tide towards decollectivization and decentralization of forest use and management. This reform was characterized by separation of use rights from collective ownership of forest land. The government created a system involving two different tenure arrangements to allocate forest lands equally to individual households, called the “two hills” system (because the forests were frequently located in the mountains). On “self-maintenance hills” or “freehold hills” (*ziliu shan*), individual rural households were awarded the private rights to use forests for subsistence purposes. Use rights were granted for the long term, usually with no limit on the contract duration, and could be inherited. On “responsibility hills” (*zeren shan*), the use and management of collective forests were contracted to households in the village or the village production group. Contract periods ranged from 5 to 15 years in the initial phase. However, they can now be prolonged to up to 70 years under a law approved in the mid-1990s. Concomitantly with this reform, collectives came to have fewer and fewer functions in rural affairs, including forest management.

There are no official data to indicate how large an area was shifted from collective to private management under the “three-fix” policy in the 1980s, but it was certainly a large share. Lu *et al.* (2002) estimated that it was about 69 percent of collective forests. Li (1996) estimated that by 1984, 1 781 counties had completed compliance with the “three fix” policy. A total of 99.7 million hectares of forest land were titled to collective ownership, while 31.3 million hectares of forests were titled to private manage-

ment by 57 million rural households. In Jiangxi Province, it was reported that by 1986, 92 percent of collective forests had come under the management of individual households through the “three-fix” policy (Liu, 2006).

In some regions of southwestern China, for example Yunnan Province (Zheng, 2006), the “two hill” system was modified around 1990 to include a third “hill”, involving further devolution of forest land owned by collectives and State farms to individual households by contracts granted through market mechanisms, such as bidding (“contract hills”). The contract duration varied from several to 70 years. Benefit sharing arrangements also varied.

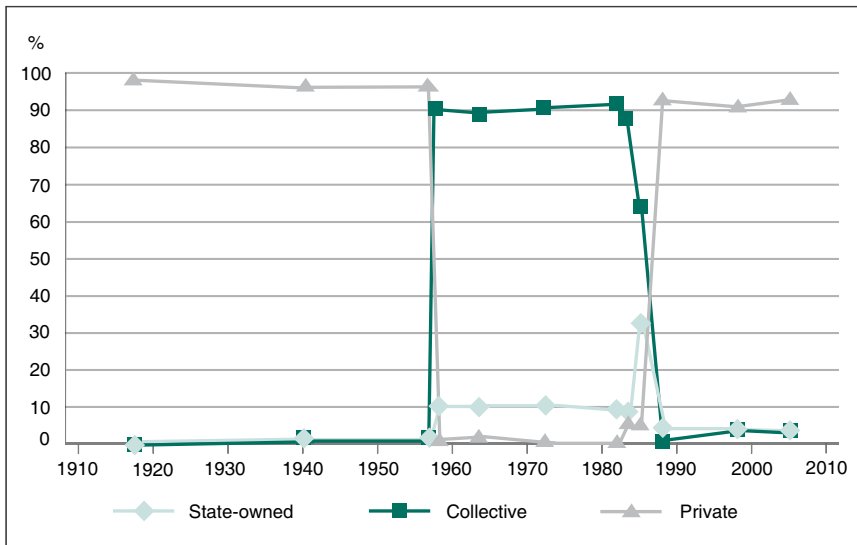
Many observers felt, however, that in its early phases the household responsibility system did not benefit China’s forestry as effectively as it did agriculture. Implementation of the “three-fix” policy was followed by vast cutting of collective forests in the mid-1980s (Liu, 2006). This was interpreted in different ways. Some academics attributed it to soaring demand for housing construction materials in rural areas following rapid rural economic development; some believed that rural farmers doubted the stability of the policy and therefore opted for quick economic returns through logging; and some ascribed it to fragmentation of forest land. Each household owned very small forests of a few hectares, usually fragmented; for instance in Liuyang County of Hunan Province, forest holdings averaged about 1 ha divided in six separate pieces. Fragmented forest lands are difficult and economically inefficient to manage.

In a few areas, the disappointment with the household responsibility system was so great that forests under individual households were returned again to collective management. In Jiangxi Province, over 92 percent of the collective forest land was under household management in 1986, falling to about 60 percent in 2000.

The development of family forests in China has faced a number of constraints, in particular insecurity of use rights. In forest areas covered by large central government programmes such as the Natural Forest Protection Programme, rural farmers are hardly permitted to harvest trees, even mature planted trees. High transaction costs and complicated documentation requirements put rural small-scale foresters at a disadvantage in the application of harvesting quotas. High taxation and other charges such as afforestation funds and forest fire protection fees deter farmers’ interest in forest management.

However, a new phase of forest tenure reform has been implemented in the past few years, extending household responsibility schemes in collective forests, expanding individual households’ rights to use forest land and making their tenure more solid. New strategies to protect rights to household forests now being piloted include small-scale foresters’ associations, shareholder forest farms, company/household partnerships and more appropriate financial and fiscal policy.

New policies, which vary by region, support transfer of ownership or sale of collective forests and safeguard private individuals’ economic return from forests, for example by promoting more transparent fee collection, favouring marketing development or lowering tax rates and charges. For instance, in Jiangxi Province charges have been reduced from around 50 percent of the value of logs produced to about 24 percent since collective forest tenure reform in 2004. Longer contracts are now given, up to 70 years. Under the strong promotion and leadership of the State Forestry Administration, tenure reform is expected to be implemented in every province in China, regardless of its share in production. Better linkages between forest policies and forest management are expected to improve the efficiency of forest management, rural livelihoods and environmental sustainability.



**Trends in forest use rights,
Jinzhou County, Hunan
Province, China**

HOUSEHOLD FORESTS IN HILLY REGIONS – THE CASE OF JINZHOU COUNTY, HUNAN

Jinzhou County, located on the south-western border of Hunan Province, is a key forest region and important timber production county, with 78 percent forest cover. Almost three-quarters of the population of 255 000 are ethnic minorities. In 2005, forestry accounted for 23 percent of total production value in the county, 60 percent of farmers' income and 20 percent of government revenue collected.

Forest property rights have shifted over time with political and social changes (see Figure). Since the late 1980s more than 90 percent of forests in Jinzhou County have been under private management, mostly by households through the following arrangements.

- Small household forests managed as part of family livelihoods accounted for about 50 percent (107 000 ha) of the total forests in the county in 2005 (see Box).
- Joint forest farms (shareholds) are created at the level of administrative or natural villages. Each household owns a share of the farm proportional to the household's capital invest-

ment, forest land and labour. The farm is governed by a directorate, supervisory board and leader group which establish rules and regulations. These three groups are responsible for decision-making, operations and distribution, and specific management and supervision of finance, respectively. In 2000, the county had 162 joint forest farms covering 52 400 ha, or 30 percent of the total forest land in the county. These farms involved almost 12 000 households, or 30 percent of the total households in the county.

- In another type of arrangement, one or several households contract a fairly

large piece of land (from tens to hundreds of hectares) from a collective or State forest farm for 30 to 50 years and plant it with fast-growing trees, e.g. Chinese fir. Lands afforested in this way include barren hills and harvested forest lands. The planting is usually carried out using paid labour.

The remaining forests in Jinzhou County are managed by the Village Committee, collective forest farms, State forest farms and private companies.

HOUSEHOLD FORESTS IN PLAINS REGIONS – THE CASE OF MINQUAN COUNTY, HENAN

Minquan County, located in the eastern part of Henan Province, is a typical county of the plains covering 120 000 ha with a population of 848 000.

Sixty years ago, forest cover was about 3 percent; moving sand dunes, sandstorms with strong winds, saline and alkaline land, drought and floods created difficult living conditions and kept grain production low and unstable. Fuelwood and timber were short. Environmental degradation and poverty went hand in hand.

This situation was reversed through shelterbelt planting, roadside and riverside greening, intercropping and agroforestry, which created a sound environment for farming and also helped provide income for farmers. By 2005, forest cover was 27.6 percent, trees numbered

A forest smallholder

Li Kaiyou is head of a five-person family from Dakai village. He has 0.6 ha of arable land and 3.7 ha of forest land.

In 2002, he sold 0.67 ha of mature planted Chinese fir (*Cunninghamia lanceolata*) at a price of 12 000 yuan (about US\$1 450). After harvesting, he regained the use rights and planted Chinese fir again in 2003.

In 1987, he rented out about 1 ha of forest land to a household from his village and reclaimed it back in 2003 after it was harvested.

He has another piece of forest of 0.5 ha planted with Chinese fir. At 14 years the trees are 7 m tall and 12 to 14 cm in diameter.

The largest piece of his forest, 1.7 ha, is covered by natural secondary mixed forests. He thinks it is a waste, as broadleaf trees provide less economic return.



FAO/J. CARLIE

Shelterbelt planting is a typical farm forest model in the plains area; trees are managed under a variety of individual and cooperative arrangements

Farm forest models and forest tenure arrangements in Minquan County

Land type	Farm forest model	Key species	Land use right	Tree ownership
Sandy land	Woodlots Intercropping	<i>Paulownia, Populus</i>	Collective or State	Contractor, State or collective
Saline and alkaline land	Forest fishery Shelterbelts	<i>Salix</i>	Collective or State	Contractor, State or collective
Along canals and watercourses	Shelterbelts	<i>Salix, Populus</i>	Collective	Collective or household
Farmland	Intercropping Shelterbelts	<i>Paulownia, Populus, fruit-tree species</i>	Household	Household
Abandoned land	Woodlots	<i>Populus, Acacia</i>	State or Collective	Contractor, State or collective
Around villages	Woodlots	<i>Paulownia, Populus, Salix, Acacia</i>	Collective or household	Household
Around residences	Home gardens Woodlots	<i>Paulownia, Populus, Acacia</i>	Household	Household

45 million and timber stocking volume was 2.8 million cubic meters. The annual timber harvest is about 150 000 m³, which is similar to the harvest of forest-rich counties in southern China. Minquan County has become a timber supplier to other regions.

Households have played a large part in this success story, by planting trees which they manage and own on farmland and around residences. Farmers are free to harvest trees in most cases. They prefer to plant fast-growing trees such as *Populus* and *Paulownia* species. Trees and forests are managed under a variety of individual and cooperative arrangements (see Table) (Zhu, 1997).

ISSUES TO BE ADDRESSED

The proportion of forests under household management in China is among

the highest in the world. Household forestry faces a number of institutional challenges:

- lack of legislative and policy framework to support development of household forests, as many elements of Chinese forestry legislation were oriented towards managing forests on a large scale;
- forestry administration targeting forests more than households, with limited opportunity for household participation;
- inflexible legislation and policy which cannot adapt well to the diversity and rapid social transformation in China.

In the long term, debate will continue on how to improve the efficiency of household forests. China is such a large country that poor performance of house-

hold forests has global impacts on forest trade, environment and equitable development. In light of increasing demands on production forests, China may need to give further consideration to reform of institutional arrangements to favour the development of family forests, for example by developing small foresters' associations and providing more adequate training on marketing and technical skills for small foresters. If reform goes in the opposite direction, it could mean a decline of household forests. ♦



Bibliography

- Li, Y., ed. 1996. *Forestry development strategy towards the 21 century*. Beijing, China, The Forestry Publishing House. [In Chinese]
- Liu, J. 2006. *Forests in the mist*. Ph.D. thesis. Wageningen, the Netherlands, Wageningen University.
- Lu, W., Landell-Mills, N., Liu, J., Xu, J. & Liu, C. 2002. *Getting the private sector to work for the public good*. London, UK, International Institute for Environment and Development (IIED).
- Zheng, B. 2006. Changes and trends in forest tenure and institutional arrangements for collective forest resources in Yunnan Province, China. In *Understanding forest tenure in South and Southeast Asia*. Forestry Policy and Institutions Working Paper No. 14. Rome, FAO.
- Zhu, Z., ed. 1997. *Participatory forestry in China*. Beijing, China, International Academic Publishers. ♦