



Food and Agriculture  
Organization of the  
United Nations

# Links between social protection and forestry policies

## Lessons from China



Cover photo: Chen Xie.

# **Links between social protection and forestry policies: lessons from China**

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## **Social Protection and Forestry Working Paper 4**

Food and Agriculture Organization of the United Nations  
Rome, 2017

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ISBN 978-92-5-109998-8

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## Foreword

Social protection is increasingly being adopted as a strategy for reducing poverty, food insecurity and vulnerability to shocks in developing countries. In parallel with the implementation of its five new Strategic Objectives, FAO has made social protection an important area of focus. Since 2014, the Organization has explored the topic of social protection for forest-dependent communities through a global literature review and country case studies.

This report focuses on the main forestry and social protection policies in China and their linkages. The findings suggest that China's social protection and forestry policies are interrelated and mutually supportive. On the one hand, social protection policies provide medical, pension and educational assistance for people dependent on forests, thereby reducing pressure on forests and increasing the efficiency of forestry policies. On the other hand, China implements forestry policies that contain integrated social protection measures to ensure livelihood improvement while promoting sustainable forest management.

It is hoped that this report will be a valuable contribution to countries' efforts to achieve coherence between social protection and forestry policies and programmes.



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## Acknowledgements

This publication was prepared with the overall coordination and technical guidance of Qiang Ma, FAO Forestry Officer working on Social Protection, under the supervision of Thais Linhares-Juvenal, Team Leader of the Forest Governance and Economics. The contribution of Peter Csoka, Senior Forestry Officer, especially in the planning and initial phase of this initiative, is gratefully acknowledged. The support from the Social Protection Team of FAO is specifically acknowledged.

Vito Cistulli, Senior Policy Officer and Marco Knowles, Economist, of the Social Policies and Rural Institutions Division provided useful comments. Thanks go also to Mark Menhinick for editing, Roberto Cenciarelli for design and layout, Federica Mereo and James Varah for proofreading, and Susy Tafuro for administrative support.

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## Acronyms and abbreviations

<b>CCFP</b>	Conversion of Cropland to Forests Programme
<b>FEDRC</b>	China National Forest Economics and Development Research Centre
<b>ILO</b>	International Labour Organization
<b>NFPP</b>	Natural Forest Protection Programme
<b>NRMS</b>	New Rural Medical Care System
<b>NRPI</b>	New Rural Pension Insurance
<b>NRP</b>	Wildlife Conservation and Nature Reserve Development Programme
<b>SFA</b>	State Forestry Administration



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## Executive summary

In a context of globalization, climate change, urbanization and rapidly developing information technology, the risks and uncertainties of forestry development are increasing. Because social protection has an increasing role in the development of sustainable forestry, a review of the main policies and their linkages was carried out, along with analysis of monitoring results from China's major forestry programmes. This report: i) reviews the rapid development of China's social protection system; ii) describes the vulnerability of China's forests and the social protection function of its forestry policies; iii) provides examples of linkages between social protection and forestry policies; and iv) summarizes experiences and challenges in social protection in relation to forestry.

China's forestry-related social protection policy for workers in state-owned forests and forestry-dependent farmers is one of the foundations of sustainable forest management: it provides medical and educational assistance and a pension system with a view to reducing pressure on forests and maximizing the efficiency of forestry policies. Social protection in China is developing rapidly but is still at a basic level: problems such as poverty, limited coverage and gaps between rural and urban areas, regions and economic sectors persist, and the risks and vulnerability related to uneven policy implementation cannot be entirely avoided in a context of urbanization, industrialization and agricultural modernization. There is still a long way to go.

### 1. Progress in China's social protection policy

In the early 1950s China's social insurance system for workers in urban enterprises covered disability, disease, birth and old age much as in the developed countries of that time, but the costs were funded by the enterprises and the state, not by the workers themselves. In rural areas, the integrated social security system was based on family self-protection with limited communal support.

With the decline of the collective-based economy in 1978, the rural social security system that depended on it came to an end and families returned to providing for their own security needs. The proportion of villages implementing cooperative medical care fell from 90 percent in 1970 to 4.8 percent in 1981, and state social protection for urban workers also fell dramatically.

Since the late 1990s China's social protection system has developed rapidly. In 1999, the "minimum living guarantee system" for urban residents was established, and the nationwide rural cooperative medical care system started in 2002 became fully operational in 2007. In 2009, the new pension insurance system for rural residents was set up, and in 2010 the national social insurance law became the legal basis for the development of China's social protection system. In 2014, the child development plan for 2014–2020 was promulgated, and in 2015 the rural teachers' support programme for 2015–2020 was issued. In recent years, inter-generational poverty<sup>1</sup> has become a focus of the social protection policy.

### 2. Forestry vulnerability and social protection

The four types of vulnerability in Chinese forestry are related to poverty, plant diseases, culture and tradition, and policy and institutional issues. Of China's 592 poverty-affected counties, 496 are in mountainous areas, major forests, and forest conservation and restoration areas. In ethnic minority areas, which are home to 40 percent of China's poor, women are the main users of forest resources but are traditionally excluded from management and decision-making in most cases. Uncertainties as to land tenure in forest areas are a risk factor for smallholder producers.

To cope with the ecological and environmental degradation caused by rapid economic growth since the end of 1990s, the Government has launched various forestry programmes. Social protection measures were designed and implemented within these programmes when

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<sup>1</sup> Inter-generational transmission of poverty refers to situations in which poverty and poverty-related factors are transferred from parents to children, who replicate their parents' poverty status when they become adults.

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decision-makers realized that sustainable management of forests is related to the economic development of forestry producers. These measures have helped to maintain and improve livelihoods and forest management.

### **3. Linkages between social protection and forestry policy**

China's social protection and forestry policies are complementary. On the one hand, social protection policies are the foundation for sustainable forest management in that they provide medical, pension and educational assistance for people dependent on forests, thereby reducing pressure on forests and increasing the efficiency of forestry policies. China's Rural Poverty Alleviation Plan (2011–2020), for example, will increase sustainable forest management in the programme area; and the Conversion of Cropland to Forests Programme led to a reduction in the proportion of poor households from 36.1 percent in 1998 to 6.6 percent in 2011.

On the other hand, even though ecological restoration and livelihood improvement may be seen as separate issues, China implements forestry policies that contain integral social protection measures. Under the Natural Forests Protection Programme, state forestry enterprises that fund forestry workers' insurance are subsidized from public finances. In 2013, 100 percent of workers were covered by medical insurance, 75.7 percent by insurance against work-related injury and 80.1 percent by maternity insurance. In 1997, before the Natural Forests Protection Programme had started, there were only 4,583 employees involved in forest management, but by the end of 2012 the figure had reached 32,775. By the end of 2012, Conversion of Cropland to Forests Programme subsidies accounted for 14.4 percent of per capita net income of households monitored by the programme and a third of household income in poor households in the programme.

### **4. The Chinese experience**

China's social protection and forestry policy was set up with the aim of solving practical problems on the basis of factual evidence.

Taking the improvement of livelihoods and forest ecology management as the fundamental goal, China's forestry ecology target has been achieved and the interests of forestry producers have been maintained.

Long-term social protection and forestry development plans have been established, and implementation mechanisms set up at the central and local government levels: these ensure effective implementation of social protection and forestry policies and achievement of their objectives.

China's social protection and forestry policies are interrelated and mutually supportive. In the Rural Poverty Alleviation and Development Programme (2011–2020), for example, forestry and ecological restoration and protection are the main objective of rural poverty alleviation. On the other hand, the new round of the Conversion of Cropland to Forest Programme has halved the subsidy, mainly because of the rapid increase of rural social protection, which could dramatically reduce the possibility of poverty induced by the programme. Social protection has become a major policy supporting the implementation of the forestry policy.

Because its forest areas are largely in remote and undeveloped areas, and in view of chronic poverty, China's main forestry policies contain integral social protection measures with a view to achieving forestry management objectives and at the same time improving the livelihoods of people who depend on forests.

China's forestry and social protection policies reflect changing conditions with a view to increasing the welfare of forestry producers and maximizing the efficiency of public financing. In the first phase of the Natural Forests Protection Programme, for example, there was a "one-time allocation for laid-off workers" system whereby workers who were made redundant received a one-time payment of CNY 20 000 to CNY 30 000 in compensation. The policy was formulated

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when China still had financial difficulties, and it resulted in loss of benefits for many workers.<sup>2</sup> Once the problem was understood, the second phase of the programme abolished the measure and a welfare policy was formulated to cover the workers who had lost their jobs in 2013 and provide benefits such as pensions and medical insurance.

## **5. Limitation and policy recommendation**

Although it is developing rapidly, China's social protection system is still at a low level. Problems such as limited coverage, different company pension systems and uneven administration persist, and there are large gaps between rural and urban areas, regions and different sectors. In rural areas, poverty is frequently exacerbated by burdens such as severe illness and high tuition fees. For historical and cultural reasons, the poverty status of China's forest regions and forest-dependent populations has not changed fundamentally. In 2013, the number of poor people in the 44 counties monitored by the Natural Forests Protection Programme was 3.6 million, 18 percent of the total population, of whom 3.5 million lived in the programme area. At the same time, the Ecological Forest Compensation Policy required forest farmers to desist from logging but provided very little compensation, which put many forest producers at risk.

China's forestry social protection policy, which is closely linked to forestry production and ecological restoration, is the product of particular circumstances. Because rapid urbanization, industrialization and agricultural modernization create significant challenges in terms of setting up an effective social protection system for China's numerous forestry producers, it is recommended that policy-makers study the issue and formulate a new forestry social protection policy to be integrated into the national social protection agenda.

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2 This was because workers who received the payment were in theory permanently laid off and received no further social security benefits. China had no national social security policy for workers at the time, and although the payment seemed generous it did not cover the real costs of losing a position; there was considerable inequity, especially for aged and injured workers. Under the new system, workers who stay in the enterprise benefit from a follow-up social security policy, and some workers who had left the enterprise have come back to seek more compensation.



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# 1. Introduction

Worldwide risk and uncertainty are increasing as a result of economic globalization and climate change. Social protection policies play a critical role in realizing the human right to social security for all, reducing poverty and inequality and supporting inclusive growth by boosting human capital and productivity, supporting domestic demand and facilitating the structural transformation of national economies [International Labour Organization [ILO], 2015]. The Chinese social protection system is in a process of reconstruction. Since the late 1990s development has been rapid: by the end of 2014 basic pension insurance covered 80 percent of the relevant population, and coverage of the New Rural Co-operative Medical Care System, which supports the rural populations who account for two thirds of China's population, stands at 95 percent.

In China, urbanization, industrialization, agricultural modernization and the rapid development of information technology have led to dramatic changes of populations, land and capital in rural areas. Demand for social protection has increased in line with the significant increase in populations facing uncertainty and risks. In this context, what types of risk and uncertainty are facing forestry, a sector closely linked with natural resources and the environment? How can a social protection policy be developed that will encourage sustainable forest management when vast numbers of rural workers are moving to cities and hence depleting the forestry labour force? These are issues that China's forestry decision-makers must consider.

Through the literature review and analysis of related monitoring results from its forestry programmes,<sup>3</sup> this report describes China's social protection policy and its main forestry policies, and analyses the relationship between them. It first reviews the history of social protection in China and its rapid development in recent years, and describes the forestry-related social protection policy. It then discusses forestry policies and their social protection elements, and subsequently considers the complementary relationship between social protection and forestry policies. Finally, with reference to actual experience and constraints, the report presents its conclusion and policy recommendation.

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<sup>3</sup> In 2003, the State Forestry Administration launched its Monitoring and Assessment of the Social and Economic Impacts of China's Key Forestry Programmes, which covered the NFPP, CCFP, Sandification Combating Programme around Beijing and Tianjin and the Wildlife Protection and Nature Reserve Conservation Programme. By the end of 2015 the monitoring system covered 27 provinces, 250 county forestry enterprises and nature reserves and 1 656 farming households. Under the system, the NFPP has 37 state forestry enterprises and 44 county-monitored sites, referred to as NFPP enterprises and NFPP counties; the CCFP has 100 counties, 120 villages and 1 165 households, referred to as CCFP counties, CCFP villages and CCFP households; and the NRC has 40 monitored nature reserves.



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## **2. Progress in China's social protection policy: from a production-related system to a unified rural/urban social protection system**

In China social protection is in a process of rapid reconstruction. For historical and institutional reasons the national social protection policy has experienced dramatic change from a situation in which the state provided almost the entire social protection function for urban residents and the rural collective-based economy was responsible for farmers' social security. The recent rapid reconstruction has focused on the establishment of a unified rural/urban social protection system. When the collective economy collapsed as result of implementation of the rural household contract system in 1978 farmers almost lost their social protection, and, along with most of the population, state forestry workers and forest farmers also experienced a major reduction of social security, followed by gradually enhanced social protection.<sup>4</sup> To reverse environmental and ecological deterioration since the end of 1990s, a series of major forestry protection and restoration programmes has been implemented, most of which have embedded social protection measures: this is because forestry decision-makers realized that poverty is a significant factor for ecological restoration and conservation. Given that poverty alleviation and economic development are long-term processes, China's forestry policy will assume the responsibility for the social protection of forestry workers.

### **2.1 The concept of social protection and its application in China**

There is no common term for the concepts of social security and social protection. The original concept of social security came from the 1935 Social Security Law of the United States of America. The ILO defines social security as a series of public measures to deal with social and economic risks intended to protect employees from termination or suspension of pay because of sickness, maternity, injury or death, resulting in a decrease in real income. It also provides medical care and family allowances [Tang, 2014].

Since the 1990s, the ILO, the World Bank and other international organizations have made social protection an important economic development issue in the international community. The ILO states that social protection is a series of policy measures to ensure that all men and women are safe and secure in the working environment, have access to adequate social services and medical services and receive an income to sustain them in times of disease, unemployment, maternity, disability or other loss of income [Tang, 2014].

The international social-security model can be divided into four categories: national welfare, as in the United Kingdom, national insurance as in the former Soviet Union, social co-funding as in Germany, and the accumulation of savings as in Singapore. China's social protection system is of the social co-funding type, with co-financing by the state, the employer and the individual. Social security is a basic part of the social and economic system in the modern state: it is a guarantee of social and economic stability and a symbol of social progress.

In China, social-security legislation ensures that citizens without an income or a low income can survive, that retired people receive a pension and that people are supported in times of unemployment, illness and injury and during maternity. As economic and social developments progress, the level of public welfare and the standard of living improve.

China currently uses the term "social security" in its policies and legislation, but the concept in fact includes social protection in the form of poverty alleviation plans and the intention to establish a unified social security system for urban and rural areas and to set up child development plans in poor regions.

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4 See section 1.2.

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## 2.2 The evolution of China's social protection policy

The 1978 reforms were the watershed of China's social protection policy. In the early 1950s, China had a dual system: a social insurance system supported urban employees, and in rural areas social security was based on the collective farm system [Li, 2002]. As in other central economies, these were cradle-to-grave programmes.

In 1951 the Labour Insurance Regulations of the People's Republic of China were promulgated. At that time, workers' insurance covered disability, disease, maternity and old age, with some welfare support for workers' immediate families. Apart from unemployment insurance, the social insurance approaches of industrialized countries had all been implemented in China, but the costs were funded by employers and the state rather than the workers themselves [Li, 2002].

In rural areas, the integrated social security system was implemented until the early 1980s. When the People's Republic of China was set up in 1949, the collective economy replaced the family as the dominant force in the rural economy. The livelihood security that had been provided by the family shifted to the commune, in that family labour supported communal production and earned returns and funded protection for commune members who lost their productive ability or experienced misfortune. From 1958 China implemented the system of cooperative medical care in most rural areas [Li, 2002], and by the mid-1970s the coverage rate had reached 90 percent. The cooperative medical care system, village clinics and a huge number of "barefoot doctors"<sup>5</sup> combined to solve the problems of the shortage of doctors and medicines in China's vast rural areas. The World Health Organization recognized the system as an example of a successful rural medical and health system in the developing world [Chen *et al.*, 2009]. The "five guarantees" provided by the family – for the aged, the infirm, the elderly, widows and orphans – were taken over by the communes, which provided food, clothing, medical care and housing, and education and funeral expenses for orphans [Li, 2002]. Nonetheless, at that time rural social security was at a low level and the family continued to be the main channel for social security; communal medical support was very limited and families bore most of the burden of medical expenses.

With the implementation of the rural household contract system in 1978, farmers obtained the right to manage land, the collective economy collapsed and rural social security again depended on family self-reliance. Land regained its dual function of production and social security, forming a rural social security system within the production system from 1978 to the mid-1980s. It was estimated that the proportion of villages implementing cooperative medical care fell from 90 percent in 1970 to 4.8 percent in 1989 [Chen *et al.*, 2009].

With the development of rural markets, industrialization and urbanization, families and land could no longer provide against the growing risks of unemployment, disease, old age and poverty facing rural society. In the 1980s, the Government reformed the urban social security system and reintroduced a family-based approach to rural social security, and has subsequently shifted its focus to social relief to lift China's 80 million poor households out of poverty. A national poverty alleviation plan was implemented in 1994,<sup>6</sup> and rural poverty has fallen dramatically.

In 1999, the "minimum living guarantee" system for urban residents was established. The New Rural Medical Care System [NRMS] was set up nationwide in 2002 and became fully operational in 2007. The New Rural Pension Insurance [NRPI] was set up in China's rural areas in 2009 [see Box 1].

In 2010, the Social Insurance Law of the People's Republic of China – the Insurance Law – provided the legal basis for the development of the social protection system. It established an old-age pension and insurance covering basic medical needs, industrial injury, unemployment and maternity for all citizens. This comprehensive, multi-level and sustainable approach, which will be adapted to match economic and social development, is helping to accelerate the formulation of China's social protection system.

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5 Many rural doctors in the period 1970–1999 were poor farmers or traditional Chinese doctors who worked on the land barefoot.

6 The National Poverty Alleviation Programme [1994–2000] got the name "eight-seven" because it was designed to ensure the subsistence of 80 million rural poor in seven years.

### Box 1. The NRMS and NRPI

The NRMS is a government-run system of medical assistance for cases of serious illness in rural areas. It provides guidance and support for farmers, who participate voluntarily. It is funded through individual contributions, collective support and government funds.

In 2002, the Government required that all levels of administration should guide farmers in building a new type of cooperative medical system to address cases of serious illness. In 2009, the Government adopted a strategic plan for further reform of the medical and health systems and established the NRMS in all rural areas. In 2015, the per capita subsidy was raised by CNY 60 to CNY 380 per year.

The NRPI, which is a government-implemented social insurance system, is an important part of the national social protection system. It is financed from three sources: individual contributions, collective subsidies and government assistance. In 2009 the pension insurance pilot covered 10 percent of China's counties, and was gradually expanded in the following year. It is expected that by 2020 the NRPI will cover all eligible rural residents.

The objective of the Rural Poverty Alleviation Plan (2011–2020) is to ensure that the rural poor are provided with food and clothing, education, basic medical care and housing. In poor areas, the rate of per capita net income growth among farmers is higher than the national average and the main public services are close to the national average; this is helping to reverse the development gap (State Council, 2011).

To address poverty and economic difficulties related to illness, which affect large numbers of people, in 2012 several provinces implemented a pilot insurance system for serious illness among urban and rural residents. To reduce the differences in healthcare between rural and urban residents, the State Council required in 2015 that insurance covering serious illness would be available for all urban and rural residents participating in basic medical insurance, with a view to reducing the financial burdens on patients. The system will be in force by 2017 (State Council, 2015). In coordination with the healthcare assistance system, insurance for serious illness will help to underpin social security and protect families against unaffordable medical expenditure. The fairness of the medical security system for urban and rural residents will be significantly improved.

In the process of urbanization and industrialization, large numbers of migrant workers have moved between regions and numerous farmers have become landless as land is appropriated for construction. The State Council issued a social security policy for these groups of farmers in 2014 with the objective of helping 100 million farmers to resettle and obtain city residents' certificates, helping 100 million migrants to urban areas to access public services and providing technical training for 20 million farmers each year (State Council, 2014).

In recent years, inter-generational poverty has become a focus of China's social protection policy. The Children's Development Plan (2014–2020) and the Rural Teachers' Support Program (2015–2020) have been issued to address this.

## 2.3 Current major social protection policies related to forestry

Forestry-related social protection policies currently cover two categories: i) workers in state-owned forestry enterprises, who are entitled to an old-age pension, basic medical insurance, unemployment insurance, industrial injury insurance and maternity insurance (National Forest Economics and Development Research Centre [FEDRC], 2014); and ii) the benefits of forest-dependent farmers.

Rural social protection policies include the NRMS, NRPI and the seven policies shown in Table 1. These policies are implemented in China's rural areas, with modifications at the local level.

There were 501.1 million urban and rural residents with basic pension insurance, and in total 842.2 million people participated in the basic pension insurance, 80 percent of the eligible population.<sup>7</sup>

<sup>7</sup> According to the 2014 *Annual Report of China Social Insurance Development* there were 1 billion people needing pension insurance: coverage is hence about 80 percent (Ministry of Human Resources and Social Security, 2015).

There were 597.7 million participants in the basic medical insurance scheme and 206.2 million in the industrial injury insurance scheme, accounting for 52.5 percent of urban workers. There were 73.6 million rural migrant workers participating in the industrial injury insurance scheme, only 26.9 percent of the total.

**Table1. Current Rural Social Protection Policies**

	Policy	Beneficiaries	Subsidy	Delivery
1	NRMS	Rural residents.	From 2011 residents each pay CMY 30 per month; the Government and provincial authority each provide CMY 60 per person per year.	When farmers receive medical treatment.
2	Rural minimum living security	1. People aged 60 or older. 2. Sick main income provider. 3. Death of main income provider. 4. Natural disaster victims.	CMY 70/person/month.	Bank account.
3	Urban and rural medical assistance*	1. Urban and rural minimum living security plan participants. 2. Five Guarantee families. 3. Workless through severe disability. 4. People with special difficulties. 5. People at the minimum living standard.	1. Participate in NRMI and basic medical insurance. 2. Out-patient medical assistance. 3. In-patient medical assistance. 4. Temporary medical assistance.	
4	Rural maternal childbirth allowance	Pregnant women.	Subsidies for medical expenses during childbirth.	
5	Rural Five Guarantees	Rural residents aged 60 or over, disabled people, people with no skills or legal support.	Cohabitants: CMY 287 per person per month. Single people: CMY 167 per person per month.	Rural credit cooperatives.
6	Old age allowance	1. People over 100 years of age receive a long-life allowance. 2. People aged 80 to 100 years receive a health subsidy.	Per person per month: 80-89 years of age: CMY 20. 90-99 years of age: CMY 50. 100 years and over: CMY 200.	
7	New rural pension insurance	Insurance: rural residents over 16. Subsidy: those over 60.	Basic pension CMY 55 per month; higher rates may be paid according to contribution levels.	
8	Rural compulsory education subsidy	Students in rural compulsory education, including high school.	Primary school: CMY 1 600 per student per month. Middle school: CMY 1 700 per student per year.	
9	Basic living allowance for orphans	Orphans	CMY 360 per person per month.	

Data source: *Agricultural Public Finance Policy Brochure*. Finance Department of Xianggelila county, Yunnan province, 2011.

\* Assists rural poor who have financial difficulties in participating in the NRMS.

On the basis of the 2010 rural poverty line of CMY 2 300 per person per year, there were 70.2 million rural poor in 2014. Nationwide there are 36 899 urban health centres, 646 044 village clinics and 34 000 pension services. By the end of 2014 there were 18.8 million urban residents participating in the urban minimum living guarantee, 52.1 million rural residents participating in the rural minimum living guarantee, and 5.3 million in the Five Guarantees scheme. With state support, 13.1 million poor city residents participated in medical insurance, and 41.2 million rural poor participated in the NRMS (State Statistics Bureau, 2014).

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## 3. Forest-related vulnerability and the social protection function of China's main forestry policies

To address the ecological damage and environmental degradation caused by rapid economic growth and to improve national living conditions, the Government has launched ecological forestry programmes such as the Natural Forest Protection Programme [NFPP], the Conversion of Cropland to Forests Programme [CCFP] and the Wildlife Conservation and Nature Reserve Development Programme [NRP], and has reformed the collective forestry tenure system with a view to safeguarding farmers' interests and improving their commitment to forest management.

In view of the history of social protection and the regional distribution of Chinese forestry producers, these programmes include social protection measures and reform policies so that they help to manage the environment and improve livelihoods.

### 3.1 Major risks and vulnerability of forestry producers in China

Forestry producers are facing risks and uncertainties related to natural, social and economic reform and development.

#### 3.1.1 Forestry poverty<sup>8</sup>

Because China's forests and forest resources largely coincide with poverty zones, forestry policy has always been a factor in reducing the burden of poverty. Of China's 592 poor counties, 496 are in mountainous areas where 85 percent of land resources are suitable for the development of forestry. The 14 contiguous poverty zones<sup>9</sup> also constitute forestry ecological restoration and conservation areas. The distribution of China's poor counties is closely related to its ecologically sensitive areas, in which 76 percent of the poor counties are located [Zhao, 2009].

In these places the vicious circle of poverty, ecological deterioration and further poverty has not been completely broken, and burdens such as sickness and school fees are hard to bear. A 2008 survey of 1 600 villages by the Development Research Centre of the State Council found that 6.1 percent of poverty was caused by tuition fees, 4.9 percent by illness and 2.8 percent by disability. A survey of rural households in 2000 showed that the main reasons why farmers took out loans were related to education [27.8 percent], purchase of agricultural tools [18.5 percent], medical care [15.4 percent] and housing 11.6 percent [Zhao, 2009].

#### 3.1.2 Risks

The long natural cycles involved in the management of wild forests and the likelihood of plant diseases constitute major risks. Forest-related business cycles may require years or decades, and the relevant risks are accordingly significant. Unlike industrial production, forest production cannot be isolated from risks related to natural events, and risks such as fire and illegal logging must also be considered. This high level of cumulative risk reduces the likelihood of stable profits from forest management [Liu et al., 2014].

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8 China's forest resources and areas of ecological degradation are mostly in remote and under-developed regions where people either rely on forests for their livelihoods or fall into the trap of ecological degradation; poverty in these regions is severe and chronic. Such regions are a focus of China's forestry development and conservation because they have a major role in ecological restoration and poverty alleviation. Poverty among forest-dependent people is known as "forestry poverty".

9 Liupan mountain, Qinba mountain and Wuling mountain, Wumeng mountains, Yunnan, Guangxi, Guizhou desertification areas, border areas in western Yunnan, Daxing'anling mountains, Yanshan-Taihang mountains, Luliang mountain, the Dabie mountains, Luoxiao mountains, the four provinces of Tibet, and three prefectures in Xinjiang. Source: *China Rural Poverty Alleviation and Development Programme (2011–2020)*.

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### 3.1.3 Ethnic minorities and women face special risks and vulnerabilities

Poverty is largely concentrated in China's ethnic minority regions, which are also major areas of forest resources; they are also ecologically fragile and in need of restoration. Even though ethnic minorities for many years accounted for only 8 percent of the population, they accounted for up to 40 percent of poverty in China. Women are the main users of forest resources in most ethnic regions: in Maku village in Jinping county, Sichuan province, for example, Hani women are the main forest users, but because they do not speak Chinese well they find it hard to communicate with the outside world, and by tradition they are usually excluded from management and decision-making. The issue is how to provide them with technologies and skills and to adapt local customs to enable women to participate fully in the management of forest resources. Women must be empowered to articulate their problems and ideas so that they can play a positive role in forest and natural resources management [Yan and Wen, 2014].

### 3.1.4 Risk and uncertainty caused by incomplete forest tenure

Chinese farmers have the right to use forest land for 70 years under the 2007 collective forest tenure reform, but they do not have full property rights. Logging can only be conducted under the national forest logging quota system. If a farmer's woodland is categorized as public forest he must abide by the relevant regulations and hence cannot decide its use. If the Government assigns a forest holding for construction the farmer should receive full compensation, but because forest land tenure is incomplete there are still risks and uncertainty for forest farmers.

### 3.1.5 Uneven implementation of policies

Because the natural environment is fragile, China's forestry policies focus on ecological restoration and protection; the NFPP and CCFP are examples of this. But forest ecological protection and restoration policies often cause varying degrees of risk and loss for forest producers, in particular when compensation does not cover their losses. At the start of the NFPP, for example, several state-owned forest enterprises stopped their logging operations and large numbers of forest workers and people reliant on the industry lost their source of income. It was estimated that implementation of the NFPP and CCFP caused 22 million people in Yunnan, Guizhou, Sichuan and Guangxi to fall back in to poverty [FEDRC, 2003].

Variations in policy implementation also increase risk and uncertainty for farmers. Poverty alleviation and local economic development, for example, are both local government objectives – but frequently a local government will seek to increase revenues for economic development to the extent that poverty alleviation goals are ignored, and it is seen as “helping the rich rather than the poor”. Cases where non-poor people profit from “spillover” of benefits intended for the poor are frequently an issue in the delivery of public financial support in China and developing countries. To target the rural poor more effectively, China has implemented whole-village poverty alleviation measures since 2001, but it was found that rural poor people accounted for only 35.5 percent of the beneficiaries of the policy, with middle-income farmers accounting for 20.2 percent and rich farmers for 44.5 percent [Yan and Wen, 2014].

## 3.2 China's main forestry policies and their social protection functions

### 3.2.1 The Natural Forest Resource Protection Programme

Following a pilot in 1998, the NFPP was launched in 2000 to preserve the 61.2 million ha of forest in the upper reaches of the Yangtze and Yellow Rivers by reducing commercial logging by 12.4 million m<sup>3</sup> annually, increasing forest cover by 8.7 million ha through re-forestation, and resettling 256 000 surplus workers. In state-owned forest areas in China's north-eastern provinces and Inner Mongolia, the programme aimed to reduce timber output by 7.5 million ha per year, maintain the 33 million ha of forest, resettle 484 000 surplus workers and transform forest-related industrial enterprises.

The second phase of the NFPP, which started in 2011, covered 11 prefectures and cities in the Danjiangkou reservoir area. The ban on logging in the upper reaches of the Yangtze and Yellow

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Rivers continued, and the area of state-owned young and middle-aged forest was increased by 4.7 million ha. Timber output in state-owned forest areas in China's north-eastern provinces and Inner Mongolia was reduced from 10.9 million m<sup>3</sup> to 4.0 million m<sup>3</sup> in the first three years of the 12th Five-Year Plan period; 12.9 million ha of young and middle-aged forest were cultivated and 3.3 million ha of reserve forest resources were maintained [Xie *et al.*, 2014a].

The NFPP has enabled workers in state-owned forestry enterprises to participate in the basic pension, medical, unemployment, industrial injury and maternity insurance schemes.<sup>10</sup>

### 3.2.2 The Conversion of Cropland to Forest Programme

The CCFP, the world's largest afforestation-based payments for ecosystem services programme [Bennett *et al.*, 2014], was launched after the catastrophic drought and flooding of 1997–1998 in the Yellow and Yangtze river basins. These were a result of years of over-exploitation of land resources and deforestation in line with rapid economic growth after 1978. The pilot took place in Sichuan, Shanxi and Gansu provinces in 1999, and by 2002 the CCFP was operational in 2 279 counties in 25 provinces with 32 million farming households. The need for grain security led the Government to halt increases in the programme area in 2007, and following the success of phase I and in the light of demands by local governments and farming households phase II was launched in 2014 with the objective of converting 2.8 million ha of cropland to forest and grass by 2020 [Xie *et al.*, 2015]. The CCFP had afforested 28.2 million ha by the end of 2014, with a total investment of CMY 299.2 billion.

Farmers who returned their cropland to forest and grass received a subsidy consisting of a seeding fee, a living allowance and an annual subsidy. The subsidy was halved in phase II, with the balance invested in farmland, rural energy, ecological migration, replanting and support for crop and animal husbandry. The objective was to enable farmers to maintain their livelihoods and promote sustainable development in the long term.

By 2016, subsidies of CMY 2 000 per m<sup>2</sup> will have been delivered to farmers in the Yellow river basin; the figure for the Yangtze basin is CMY 2 840 per m<sup>3</sup>. Investments under the CCFP have become an important income source for the farmers involved, especially the poorer ones, reducing vulnerability by enabling them to manage economic and natural risks.

### 3.2.3 The Wildlife Conservation and Nature Reserve Development Programme

The NRP is a first in the history of wildlife conservation: it focuses on long-term ecological protection with a view to solving problems such as genetic preservation, biodiversity protection, nature conservation and wetland protection. It was launched on 21 December 2001 with the overall objective of preserving wild animals and plants and expanding and improving national nature reserves to restore and develop rare wildlife species and plants. The aim is to increase the number of nature reserves to 2 500 by 2050 with a total area of 172.8 million ha, 18 percent of China's land area. The reserves will include major wetlands and a wide range of animal and plant species; they will feature advanced facilities for maximum efficiency and are expected to exert international influence. In phase I [2001–2010] the main target was to implement 15 wildlife rescue projects and establish 1 800 nature reserves totalling 155 million ha, 16.1 percent of China's territory, and to establish 80 wetland areas.

The main investments are for the construction of the nature reserves and for staff support. The programme has no direct social protection function, but because nature reserves are closely linked with nearby communities, implementation of the NRP inevitably affects the social welfare of local populations.

### 3.2.4 Reform of collective forestry tenure

Collectively managed forests cover 167 million ha, 58.2 percent of China's forest area of 287 million ha, and constitute an important part of its forest resources. Collective forest

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<sup>10</sup> Basic old-age insurance has been compulsory since 1991. Employers and employees pay pension insurance premiums, and when an employee reaches retirement age, or otherwise satisfies the requirements, the social insurance agency pays the pensions and other benefits.

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management has a significant role in forest conservation and restoration, poverty alleviation and rural development.

Since the economic reforms and opening up to the outside world in 1978, collective forestry tenure has been reformed several times. But problems persist with regard to lack of clarity in forest tenure, management responsibility and development mechanisms, and variable distribution of forestry benefits. To liberate and develop forestry productivity, develop modern forestry approaches and increase farmers' incomes, China launched a new round of reforms in 2003: this included clarification of property rights, reduction of the tax burden, liberation of forest management and regulation of forest land transfers. In 2008 the Government proposed a five-year timeline for fulfilling the main tasks of clarification of property rights and reallocation of forest land to farming households. Once the main reforms are established and farmers' benefits are protected, the Government will introduce five complementary reforms affecting: i) farmers' forest management and disposal rights; ii) regulation of forest, tree and land transfers; iii) public financial support for forest insurance; iv) the forest compensation policy; and v) the organization of forestry cooperatives [Cao, 2014].

These reforms include several measures related to social protection: i) establishment of public financial support for forest insurance to help forest farmers to withstand natural disasters; ii) improvements to compensation mechanisms at the national and local levels, with a gradual rise in compensation levels; iii) establishment of input subsidy mechanisms for afforestation, conservation, management, fire prevention, pest control and seedlings, and the extraction of biogas, wood oils, biomass energy, valuable tree species and large-diameter timber; and iv) construction of water, electricity and communications systems, roads and other infrastructure. These will be legally incorporated into local government development plans, with a focus on forestry infrastructure in China's remote mountainous areas, sandy areas and ethnic minority areas.

## 4. Mutual promotion between social protection and forestry policies

China's social protection and forestry policies are complementary and mutually reinforcing. The social protection policy is the foundation for sustainable forest management in that it provides basic medical, pension and education support for forest-dependent people; as development accelerates standards will rise and the social protection policy will become a major support mechanism for sustainable forestry. On the other hand, forests play an important role in the livelihoods and food security of forest-dependent people by providing food, energy and incomes that in turn mitigate risks and reduce vulnerability; these constitute a social protection function that will become increasingly important as forestry reforms and development emerge.

### 4.1 The function of social protection in sustainable forest management

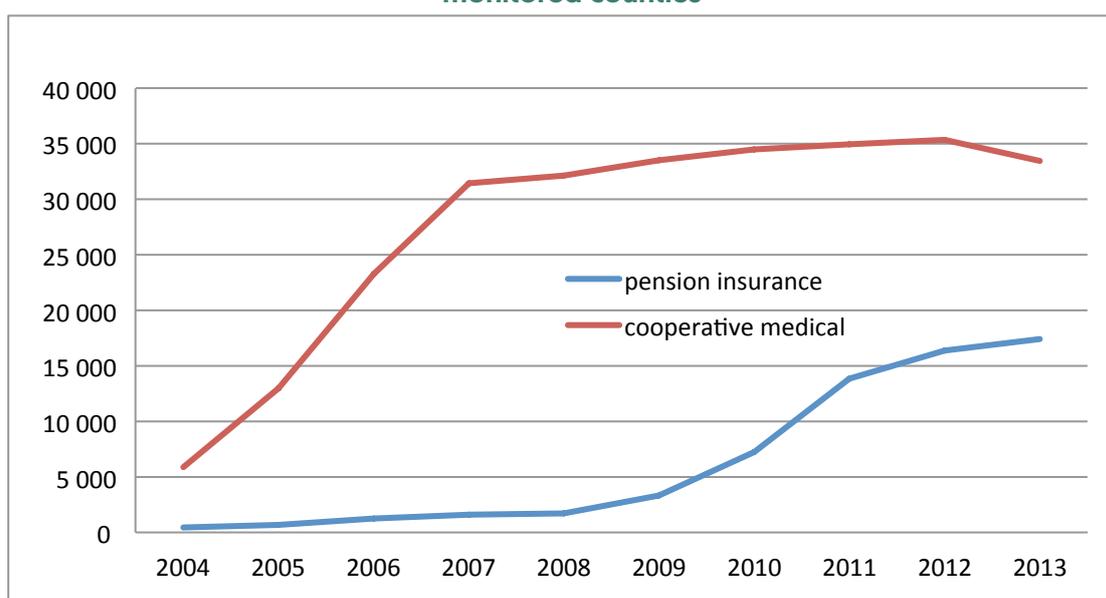
China's inclusive social protection policies promote sustainable forest management in that they improve the economic and social development of forestry producers through social protection in terms of health, education, insurance, housing and employment thereby reducing pressure on forest resources and promoting forestry development, and in that social protection has an important role in promoting sustainable forest management.

#### 4.1.1 Improved management of social, economic and environmental risks

As has been shown in Table 1, China's rural social protection policy supports farmers and helps them to manage social and economic risks and environmental threats.

Monitoring results from the CCFP show that since 2004 the population participating in the new rural medical insurance and new pension insurance has increased: by the end of 2013 in the 100 CCFP monitored counties there were 17.4 million people participating in the new pension

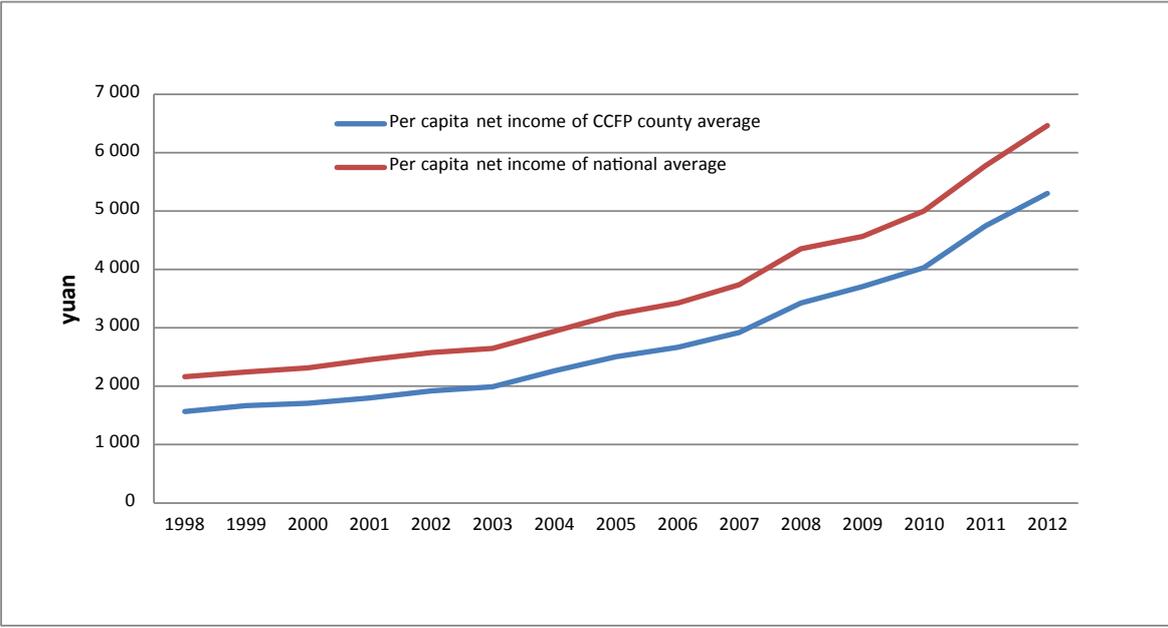
**Figure 1.**  
Change of rural cooperative medical and pension insurance of 100 CCFP monitored counties



insurance, 81.8 percent of the labour force, and 33.5 million people participating in the new medical insurance, 72.4 percent of the labour force.

With gradual economic development and social protection, rural residents' incomes and living standards have improved considerably, which has in turn enhanced their ability to withstand natural and social risks. The CCFP monitoring results show that per capita net incomes in the 100 CCFP monitored counties increased from CMY 1 568 in 1998 to CMY 5 297 in 2012, a 237.8 percent increase when inflation is taken into account;<sup>11</sup> at the same time average per capita net income grew from CMY 2 161 to CMY 6 462, a 199.0 percent increase.

**Figure 2.**  
**Per capita net income change of CCFP counties and national average**



**4.1.2 Direct income support can help to alleviate extreme poverty and overcome food insecurity**

The Five Guarantees system in rural China ensures minimum incomes and essential food and subsistence support for the rural poor with a view to eliminating extreme poverty.

**4.1.3 Social protection schemes can increase the adoption of sustainable forest management practices**

The expression “more poor and more cultivation – more cultivation and more poor” encapsulates the vicious cycle of poverty and ecological deterioration. The provision of education and medical assistance for the rural poor will reduce their exploitation of forest resources and hence promote the adoption of sustainable forest management practices. China’s rural poverty alleviation plan for 2011–2020 focuses on forestry and the environment: its implementation will increase sustainable forest management in the programme area.

**4.2 The social protection function of major forestry policy**

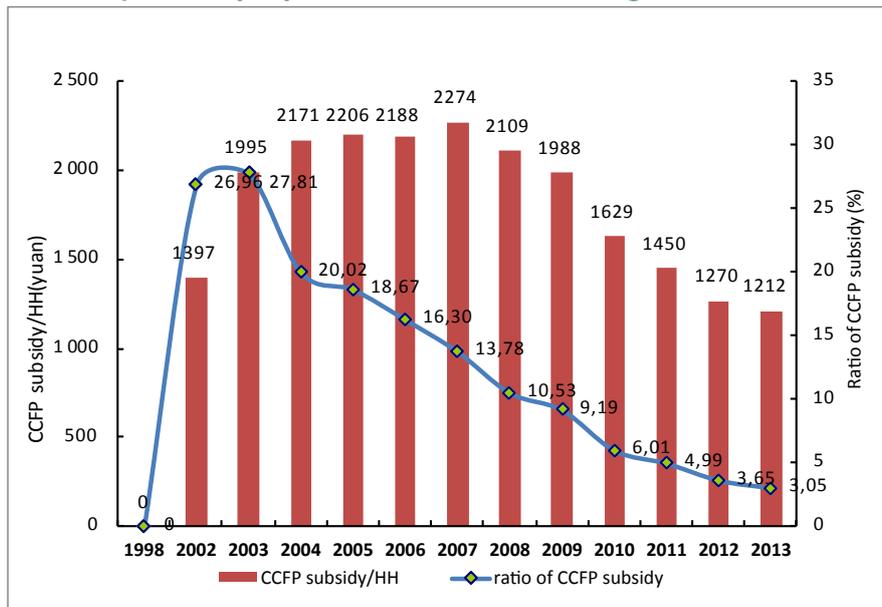
**4.2.1 Improving livelihoods**

**4.2.1.1 Increased farm incomes**

The CCFP subsidy has become an important income source for the rural poor. Monitoring results show that by the end of 2012 the average CCFP farming household received CMY 20 400 in subsidies, accounting for 14.4 percent of per capita net income in CCFP monitored households

<sup>11</sup> Calculation based on rural consumer price index for 1985–2014, with 1998 = 100. State Statistics Bureau (2014).

**Figure 3.**  
CCFP subsidy and its proportion in CCFP monitoring households' net income

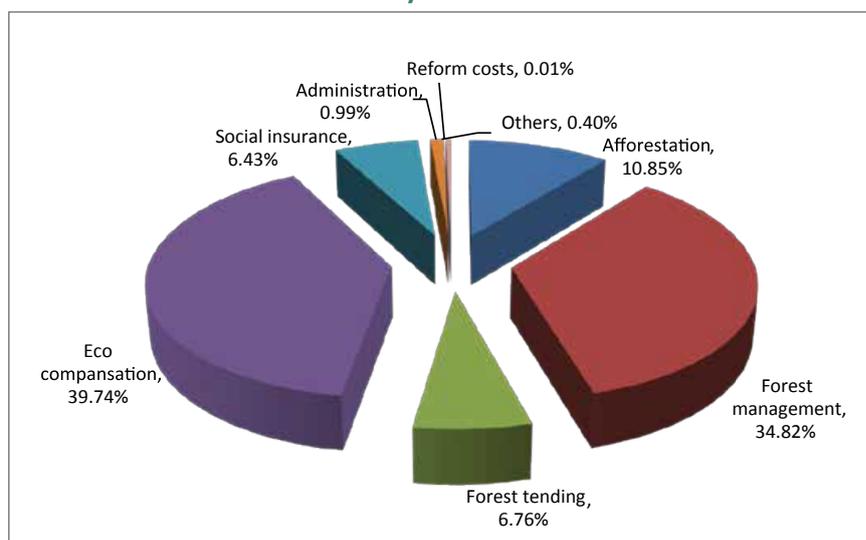


and 33.0 percent of household income among poor CCFP households. The poverty ratio in CCFP monitored households fell from 36.1 percent in 1998 to 6.6 percent in 2011 [Xie et al., 2014b].

NFPP investments increase farmers' incomes: county monitoring results show that in 2013 expenditure on ecological compensation, forest tending and management and social insurance,<sup>12</sup> which are linked with NFPP workers' as well as farmers' livelihoods, accounted for 87.8 percent of the year's investments. Since the launch of the second phase of NFPP, subsidies for forest management personnel in the monitored villages have increased; in 2013 there were 549 forest management personnel in the 91 NFPP monitored villages, 494 of whom were farmers earning an average of CMY 3 608 [Gu and Wang, 2014].

In 2013, the state forest ecological compensation area reached 93.3 million ha, 44.9 percent of China's forest land; the total compensation fund stood at CMY 11.9 billion. There are also 26 provinces that have set up local forest ecological compensation funds totalling CMY 4.6 billion covering 25.9 million ha of forest area. These compensation funds have become income sources for forest land owners.

**Figure 4.**  
2013 NFPP county investment structure



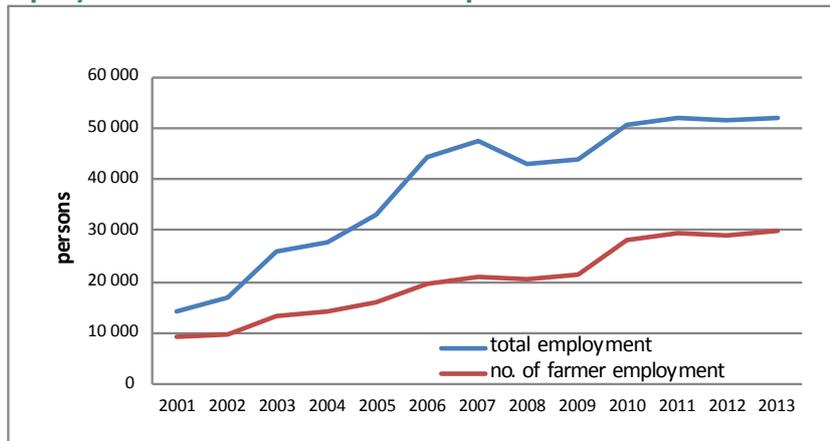
<sup>12</sup> Some of the five insurances applied to state forest enterprise workers.

#### 4.2.1.2 Increased employment opportunities

Eco-afforestation, forest protection, forest tending and other tasks, and the development of an under-forest economy<sup>13</sup> have directly and indirectly stimulated local employment in the programme area. The problems of laid-off workers and surplus rural labour caused by the NFPP logging ban and reduced demand for labour by the CCFP have been gradually addressed, and the economic stability of the programme areas has been assured [Xie *et al.*, 2014b].

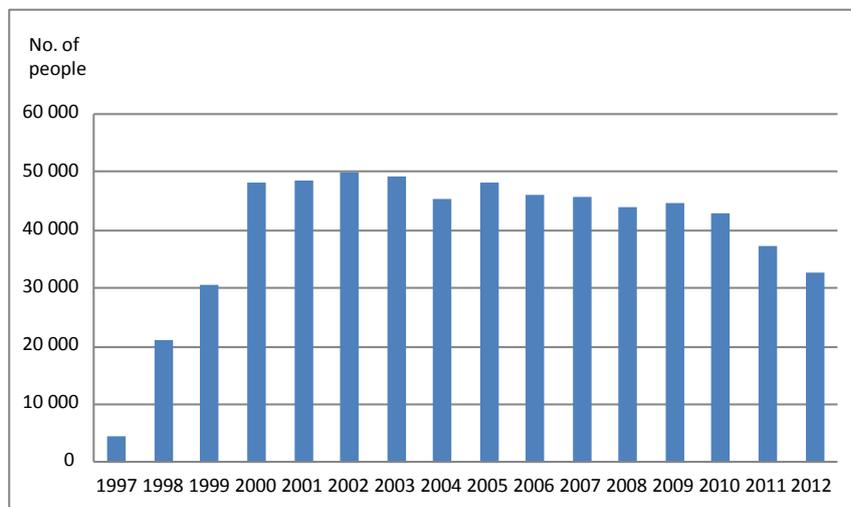
Monitoring results from 40 nature reserves show that since the launch of the Wildlife Conservation and Nature Reserve Development Programme [NRP] in 2001, total employment opportunities increased from 14 307 to 51 976 in 2013. Each year the 40 nature reserves generated 38 698 employment opportunities on average, of which 20 168 were for local farmers [Yu *et al.*, 2014].

**Figure 5.**  
**Employment contribution of 40 sampled nature reserves of the NRP**



By the end of 2012, forest management had generated 17 600 employment opportunities in the 44 NFPP monitored counties, of which 9 400 were for farmers. Forest management generated 42 000 employment opportunities in the 37 NFPP monitored forestry enterprises. In 1997, prior to the NFPP, there were only 4 583 employees involved in forest management, but by the end of 2012 the figure had reached 32 775 – a sixfold increase [Gu *et al.*, 2014].

**Figure 6.**  
**Employment of forest management in 37 sampled state forestry enterprises of the NFPP**



<sup>13</sup> A combined management approach for developing forestry along with agriculture and herding under the forest canopy.

### 4.2.1.3 Increase supply of forest products and reduce vulnerability

Forestry activities provide farmers with food and incomes derived from timber and non-timber products, thereby increasing resilience to risk and reducing vulnerability.

Monitoring results show that outputs from CCFP economic forests increased and became important sources of food and income for the monitored households. In 2011, the output of fruit accounted for 39.1 percent of CCFP forest products, bamboo for 73.4 percent and fuelwood for 25.5 percent. The CCFP also produced large amounts of food, wood oil and medicinal herbs [Xie *et al.*, 2012].

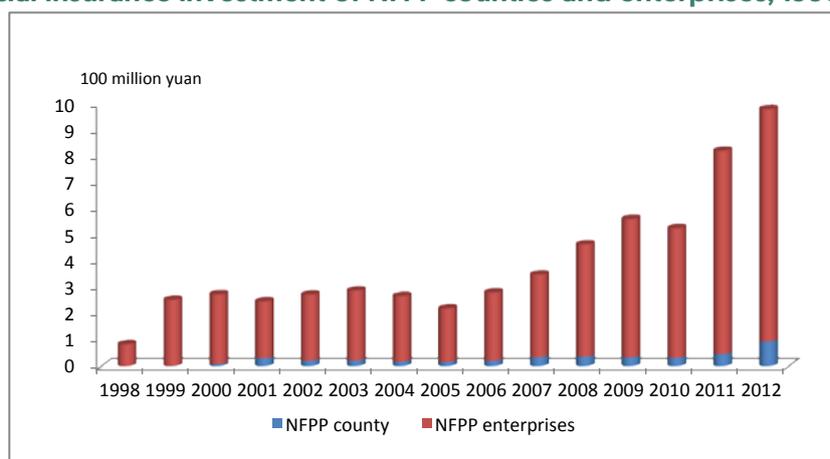
**Table 2. Main CCFP outputs and ratios in total CCFP household output**

	Bamboo poles	Bamboo %	Fuelwood per 0.5 kg	Fuelwood %	Fruit per 0.5 kg	Fruit %
<b>2002</b>			700	0.06	3 255	2.13
<b>2003</b>	10 000	8.20	3 480	0.31	5 092	2.14
<b>2004</b>	18 300	28.86	25 830	2.40	110 364	41.03
<b>2005</b>	33 310	39.02	34 550	3.58	310 090	51.12
<b>2006</b>	34 046	33.17	51 450	5.43	224 935	32.45
<b>2007</b>	44 080	36.99	104 050	12.23	320 034	25.05
<b>2008</b>	60 410	46.39	178 487	19.27	364 271	22.97
<b>2009</b>	60 170	64.46	156 564	18.83	484 264	45.64
<b>2010</b>	61 120	49.95	174 310	17.95	336 370	31.87
<b>2011</b>	100 600	73.40	256 793	24.54	468 830	39.11

### 4.2.2 Provide social protection measures

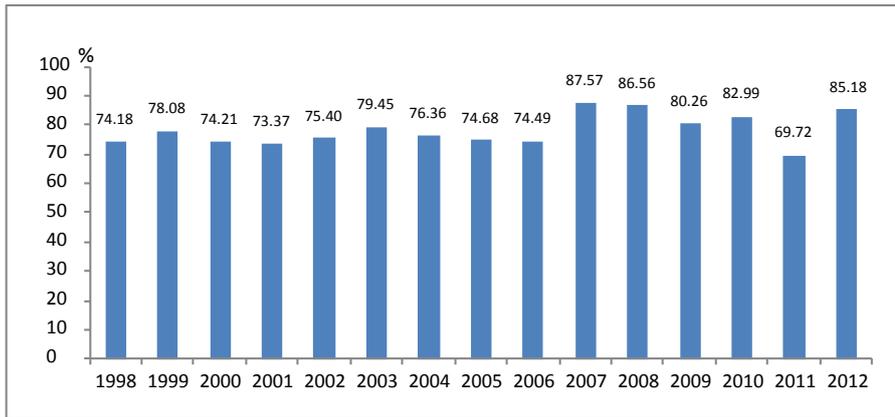
The NFPP includes direct social protection measures.<sup>14</sup> Forestry workers initially received subsidies for pension insurance, and as the programme developed more of the budget was allocated to their social protection in the form of subsidies for medical expenses, pension payments, unemployment, work injury and maternity insurance. By the end of 2012 the total social insurance subsidy for NFPP monitored counties and enterprises had reached CMY 5.9 billion [Xie *et al.*, 2014a].

**Figure 7. Social insurance investment of NFPP counties and enterprises, 1998-2012**



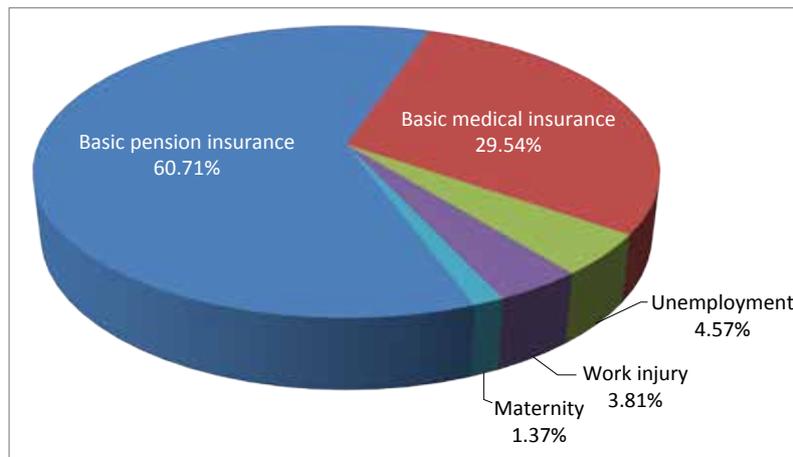
<sup>14</sup> Changes in NFPP social protection for state forestry workers parallels the development of China's overall social protection process. Before 1978, the state provided cradle-to-grave social security for state workers, but these were withdrawn in the reforms before the rapid reconstruction of a new social protection system. In the early years of NFPP, the policy was to protect forests by downsizing forest work forces to reduce the populations. The "one-time settlement measure" that removed state forest workers permanently with compensation of CMY 10 000–30 000 per person was the main NFPP policy instrument; but when the negative impact of the measure was realized it was terminated in phase II. Some forest workers who had been affected obtained compensation from the Government in the form of basic insurance. The NFPP has gradually increased its investment in state forest workers' insurance, particularly in recent years. By using part of its investment as forest workers' insurance, the NFPP has made a considerable contribution to China's social protection policy.

**Figure 8.**  
**Pension insurance participation ratio of NFPP enterprises, 1998-2012**

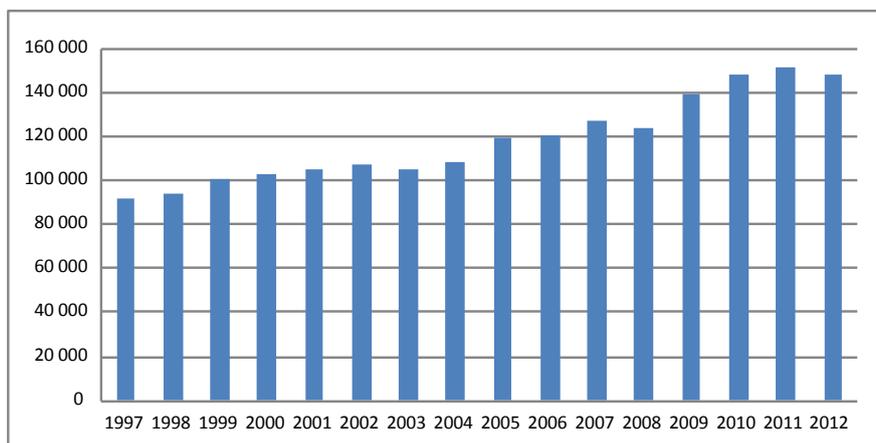


In NFPP phase II, subsidies for social insurance in state-owned forestry enterprises continued to come from public finances with a view to raising standards, increasing participation rates and enlarging coverage. In the first three years the total social insurance subsidy for NFPP monitored enterprises reached CMY 2.5 billion. The average annual subsidy was CMY 847 million yuan, 2.7 times that of the phase I average. In 2013 participation rates were 100 percent for medical, 75.7 percent for unemployment, 85.3 percent for work injury, 80.9 percent for maternity. In 2012 there were 147 600 retired people enjoying the basic pension, a 60.6 percent increase from 1998.

**Figure 9.**  
**Social insurance subsidies for NFPP enterprises in 2013**



**Figure 10.**  
**Retired forest workers on pension in 37 state forestry enterprises**



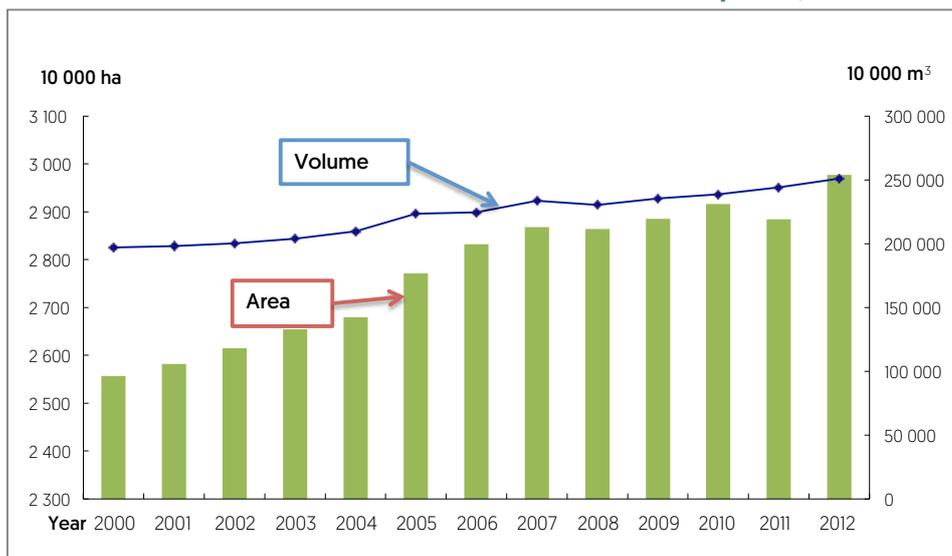
### 4.2.3 Stimulate sustainable forest management

China's forestry programs have changed the work of forestry employees and farmers and promoted the restoration of forest resources. Forest workers shifted from logging to forest oversight, large tracts of degraded land were restored to forest, and thousands of farmers who had never engaged in forestry started to plant and manage forests. With the rapidly increasing output of non-timber products and the development of tourism the pressure on forest resources was substantially reduced in the programme areas.

#### 4.2.3.1 Increase forest resources

The NFPP has curbed excessive consumption of forest resources, which are recovering in the programme areas; forest stock in the protected areas is improving constantly, and the CCFP and the Sandification Combating Programme have turned hillsides and desertified cropland accounting for 7.9 percent of China's arable land into forest. Forest resources have increased markedly: in 2012 forest areas had grown by 16.4 percent, stock by 27.4 percent and coverage by 46.9 percent in all the sample enterprises and reserves compared with 2000. Forest areas in the sample enterprises and reserves under the NFPP grew by 11.3 percent, those under the CCFP by 20.7 percent, those under the Sandification Combating Programme by 29.4 percent and those under the Wildlife Conservation Programme by 20.3 percent. The results also show that the quality of forest resources has improved and per-unit stock has increased: in 2012, forest stock per hectare in the sample enterprises and reserves stood at 84.3 m<sup>3</sup>/ha, an increase of 7.3 m<sup>3</sup>/ha – 9.5 percent – from 2000. Areas of natural forest have also increased: in 2012, natural forest in sample enterprises covered 13.5 million ha, an increase of 9.9 percent from 2000 (Xie *et al.*, 2014a).

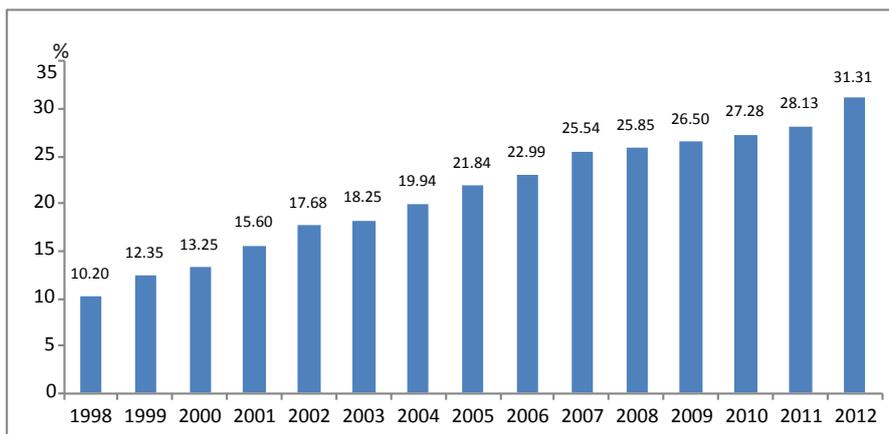
**Figure 11.**  
**Forest resources of all monitored counties and enterprises, 2000-2012**



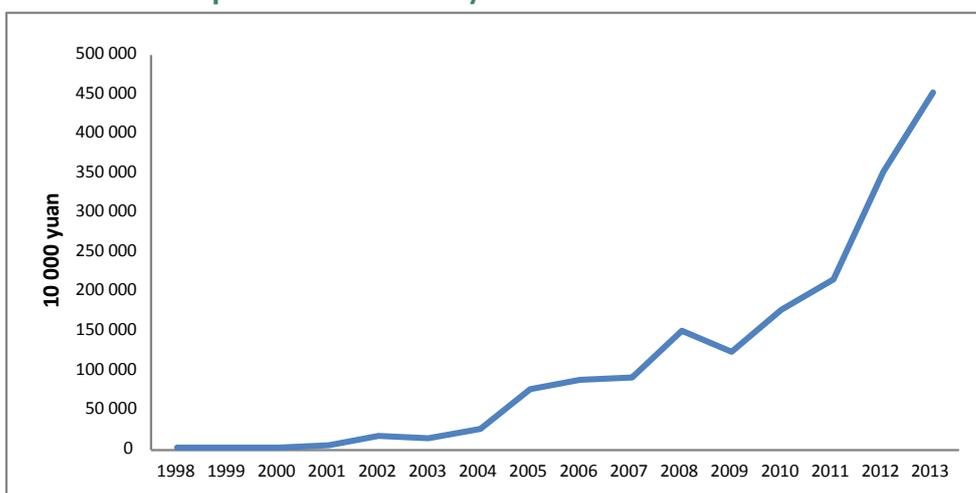
#### 4.2.3.2 Change forestry production structures

Under the NFPP the proportion of the values of non-timber output in the monitored enterprises rose from 10.2 percent in 1998 to 31.3 percent in 2012. In the NFPP counties the proportion of the value of traditional forest outputs such as timber and processing fell from 16.2 percent in 1998 to 5.3 percent in 2013. Taking inflation into account, the value of forest tourism increased from CMY 21.3 million in 1998 to CMY 4.5 billion in the NFPP monitoring counties. In 2012, the value of medicinal herbs had increased eightfold and that of forest products threefold compared with 2000 levels.

**Figure 12.**  
**Proportion of value of non-timber uoutputs in the 37 NFPP enterprises**



**Figure 13.**  
**Output value of forestry tourism in 44 NFPP countries**

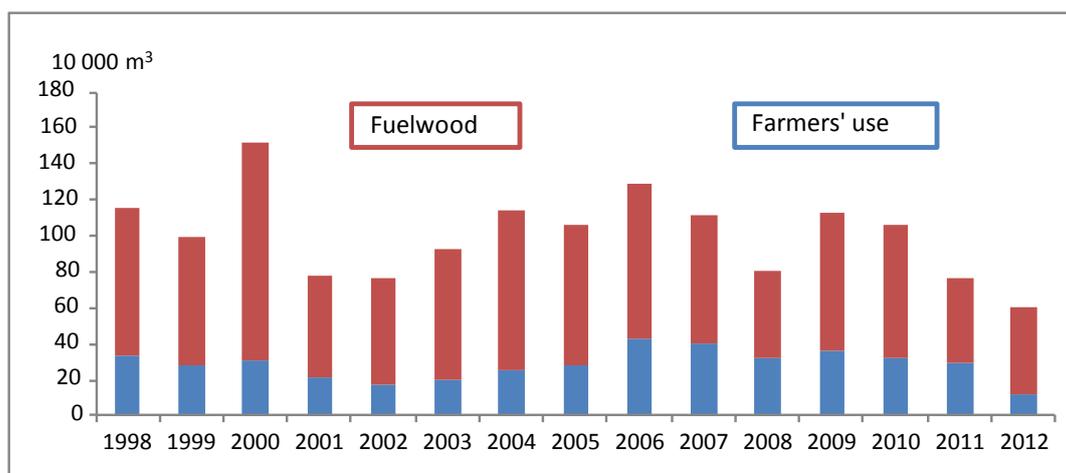


#### 4.2.3.3 Reduce fuelwood consumption and increase use of new energy sources

The NFPP has led to reductions in the use of fuelwood and non-commercial timber in the programme areas, and the conservation and resource-use objectives of the CCFP, the Sandification Compacting Programme around Beijing and Tianjin and the NRP have accelerated the adoption of new sources of energy in rural areas. Monitoring data show that in 2012 the use of fuelwood fell by 62.8 percent and use of non-commercial timber by 42.6 percent compared with 1998 (see Figure 14). The number of households using wood as their main source of energy fell by an average of 5.4 percent per year between 1998 and 2012.

New energy sources are rapidly gaining popularity. Between 2004 and 2010, the number of methane tanks in 79 NFPP sample villages in the Yangtze and Yellow River valleys increased by 438.7 percent, the number of households using efficient wood stoves by 67.9 percent, those replacing fuelwood with electricity or gas by 39.5 percent, and those using solar energy by 551.5 percent. Energy development in rural areas has been included in the CCFP since 2008, and 201 500 methane tanks, 209 200 solar energy panels and 411 500 energy-saving stoves had been built in the sample counties by 2012. As new energy projects emerged, ownership of methane tanks rose to 21.5 percent, energy-saving stoves to 25.4 percent, solar-energy stoves to 11.9 percent and solar panels to 19.3 percent among rural households participating in cropland-to-forest conversion [Xie *et al.*, 2014a].

**Figure 14.**  
**Forest volume consumption: fuelwood and farmers' use in 44 NFPP countries**



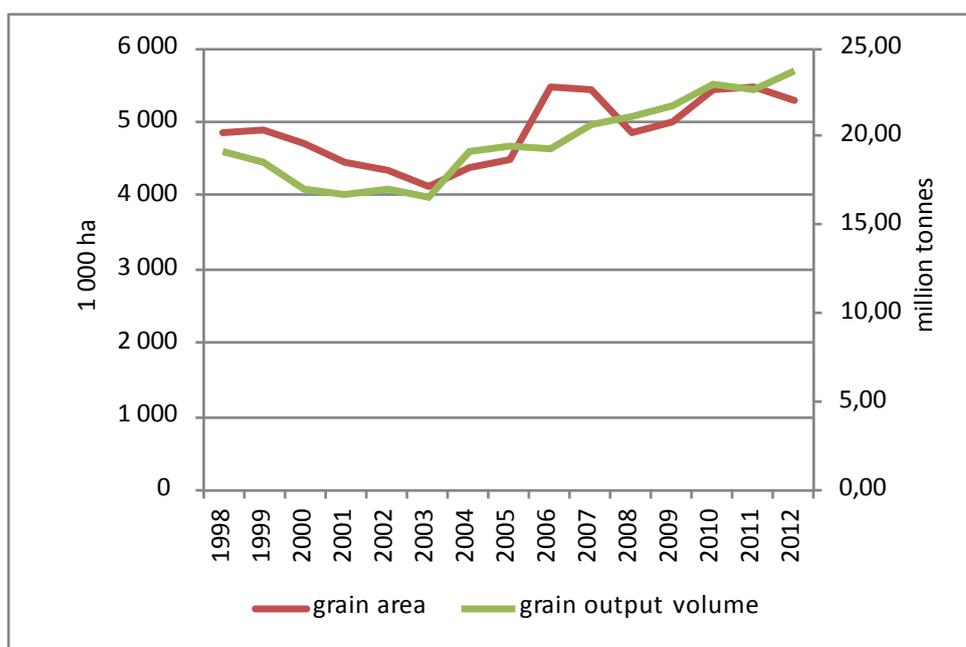
#### 4.2.4 Enhance development capacity

The CCFP focuses on parallel improvements in agriculture and rural development. In phase II measures such as new croplands, rural energy sources and ecological settlement have enhanced the development potential of the programme population.

##### 4.2.4.1 Enhance cropland productivity and increase grain supply

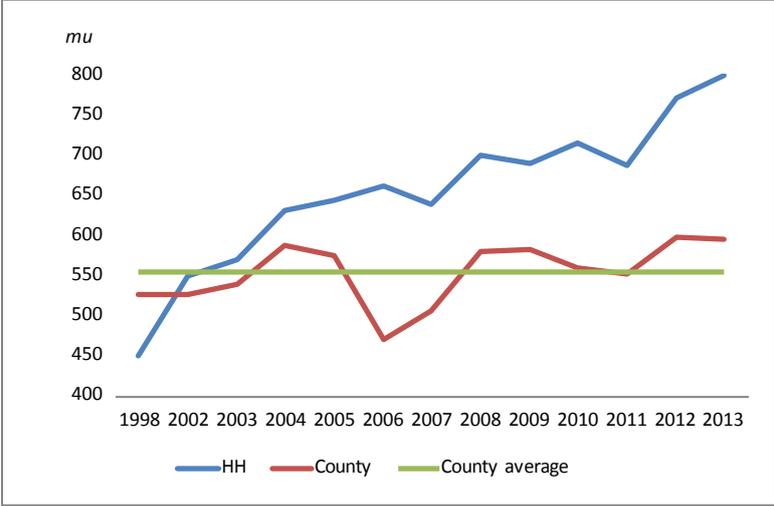
By increasing cropland management and improving the agricultural environment the CCFP has helped to increase productivity. The grain-production area in the 100 CCFP monitored counties increased by 9.7 percent and grain output by 23.9 percent after the programme started in 1998, 14.3 percentage points higher than the growth rate for the whole area.

**Figure 15.**  
**Change of grain area and grain output volume in 100 CCFP counties**



The CCFP also contributed to increased grain yields. In 2013 the average grain yield of CCFP monitored households was 800.6 *jin/mu*,<sup>15</sup> 31.5 percent higher than the CCFP monitored county average of 595.5 *jin/mu*. Grain yields in monitored CCFP households increased by 74.0 percent between 1998 and 2012, 13.4 percent more than in the CCFP monitoring counties.

**Figure 16.**  
Changes in grain yield: CCFP counties and households

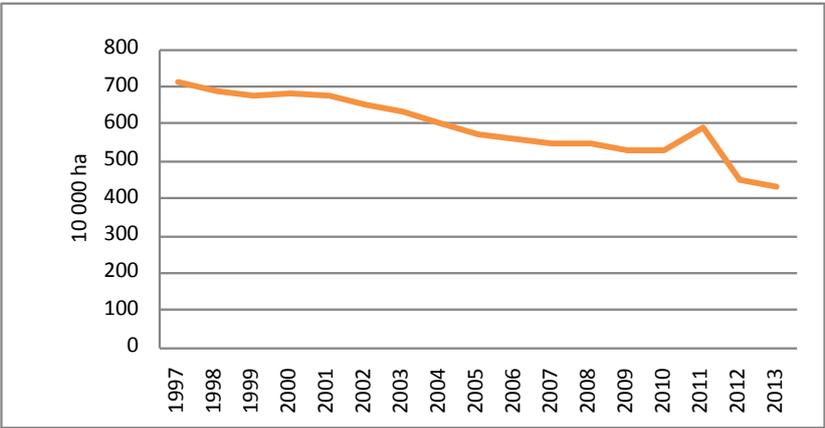


**4.2.4.2 Enhance resilience to natural disasters and plant disease**

Before the NFPP started in 1997, 7.1 million hectares of land were subject to soil and water erosion; in 2013 this had been reduced to 4.3 million hectares – a reduction of 39.7 percent.

**4.3 The role of collective forestry tenure reform in social protection**

**Figure 17.**  
Area of water and soil erosion of 44 NFPP counties



The reform of collective forest tenure has granted forest land and tree property rights to millions of farming households, thereby enhancing their resilience to risk through the acquisition of sound family assets. As in the reforms to national forestry programs, some of the measures have embedded social protection elements such as publicly subsidized insurance, which also enhance farmers’ resilience.

<sup>15</sup> 1 *jin* = ½ kg, 15 *mu* = 1 ha.

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### 4.3.1 Enhance farmers' property rights

By the end of 2013, clear property rights had been established for 180.3 million ha of collective forest, of which 121.3 million ha was granted to farming households – 67.2 percent of the total. Collective forest land covers 41.13 million ha – 22.8 percent – and other forms of forest land 17.9 million ha – 9.9 percent. The 101 million forest land certificates that have been issued cover 176.0 million ha of forest, 97.7 percent of the total; and 90.8 million farming households have received certificates – 60.5 percent of those involved in the reforms [State Forestry Administration [SFA], 2014].

It is hence estimated that the reform of forest tenure has on average granted 1.3 ha of forest land and forest to each farming household, and forest property has become a major production factor and asset that provides income and enhances resilience to risks.

### 4.3.2 Developing forest insurance

Forest insurance had been developed in 26 provinces by 2014, covering 100.1 million ha of forest land insured for RMB 73.1 billion. The gross premium was RMB 6.8 billion yuan, of which RMB 1.8 billion was forest insurance subsidy. On average, the insurance amount was RMB 7 306.5/ha. Forest insurance was purchased by 21.5 million farming households in 2014; insurance claims amounted to RMB 1.0 billion, benefiting 939 million farmers [SFA, 2015].

### 4.3.3 Increase forest tenure mortgages

Forest tenure mortgages were in force in 26 provinces in 2014, in relation to an area of 4.7 million ha. The total value of loans was RMB 116.6 billion. On average, farmers received loans of RMB 24 931/ha. In the mortgage area, 2.3 million ha were held by farming households, which obtained RMB 51.8 billion in loans for forest tenure mortgages – RMB 11 700 per household on average [SFA, 2015].

### 4.3.4 Organizing forestry cooperation

There were 115 700 forestry cooperation organizations in 2013 involving 13.7 million households – 9.2 percent of forest tenure reform households. The land area involved was 15.1 million ha, accounting for 8.4 percent of collective forest land. Among the cooperation organizations were 47 100 specialist forestry cooperatives managing 7.3 million ha through 7.6 million member households [SFA, 2014]. Participation in forestry cooperatives has considerably improved forest farmers' ability to deal with production and market risks.

Forestry cooperatives reduce the risks of forest management and increase producers' resilience. A successful example is the Three-Prevention Association of Dacao village, Tonggu county in Jiangxi province. In response to challenges related to forest fires, theft, pests and diseases the village set up the association in 2006 to reduce the risks for small-scale farmers, reduce the costs of managing and protecting trees, and maximize the efficiency of the rural labour force. Since its foundation, the association has helped to protect forest assets and has substantially increased farmers' resilience [Wang, 2012].

### 4.3.5 Increased ecological compensation

In 2014, the forest area involved in the state ecological compensation system was 53.3 million ha; total funding was CMY 11.9 billion of which CMY 11.0 million came from public finances. Provincial ecological forest funds were set up by 26 provinces covering 25.9 million ha of forests and paid out CMY 4.6 billion in compensation in 2014 [SFA, 2015]. The funds have provided incomes for farmers and increased their resilience.



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## 5. Experiences and limitations

### 5.1 Experience

China's social protection and forestry policy was set up with the aim of solving practical problems on the basis of factual evidence.

Taking the improvement of livelihoods and forest ecology management as the fundamental goal, China's forestry ecology target has been achieved and the interests of non-specialist forestry producers have been maintained.

Long-term social protection and forestry development plans have been established, and implementation mechanisms set up at the central and local government levels: these ensure effective implementation of social protection and forestry policies and achievement of their objectives.

China's social protection policy and forestry policy are interrelated and mutually supportive. In the Rural Poverty Alleviation and Development Programme (2011–2020), for example, forestry and ecological restoration and protection are the main objective of rural poverty alleviation. On the other hand, the new round of CCFP reduced the standard level of subsidies. The main reason is the rapid increase of rural social protection, which could dramatically reduce the possibility of CCFP-induced poverty. Social protection has become a major policy supporting the implementation of the forestry policy.

Because its forest areas are largely in remote and undeveloped areas, and in view of chronic poverty, China's main forestry policies contain integral social protection measures with a view to achieving forestry management objectives and at the same time improving the livelihoods of people who depend on forests.

China's forestry and social protection policies reflect changing conditions with a view to increasing the welfare of forestry producers and maximizing the efficiency of public financing. In the first phase of the NFPP, for example, there was a "one-time allocation for laid-off workers" system whereby NFPP workers who were laid off received a one-time payment of CNY 20 000 to CNY 30 000 in compensation. The policy was formulated when China still had financial difficulties, and it resulted in loss of benefits for many NFPP workers. Once the problem was understood, the second phase of the NFPP abolished the measure and a welfare policy was formulated to cover NFPP workers who had lost their jobs in 2013 and provide benefits such as pensions and medical insurance.

### 5.2 Limitations

Although it is developing rapidly, China's social protection system is still at a low level. Problems such as limited coverage, different company pension systems and uneven administration persist, and there are large gaps between rural and urban areas, regions and different sectors. In rural areas, poverty is frequently exacerbated by burdens such as severe illness and high tuition fees.

For historical and cultural reasons, the poverty status of China's forest regions and forest-dependent populations has not changed fundamentally. In 2013, the number of poor people in the 44 NFPP monitored counties was 3.6 million, 18 percent of the total population, of whom 3.5 million lived in the NFPP programme area. At the same time, the Ecological Forest Compensation Policy required forest farmers to desist from logging but provided very little compensation, which put many forest producers at risk.

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China's forestry social protection policy, which is closely linked to forestry production and ecological restoration, is the product of particular circumstances. Because rapid urbanization, industrialization and agricultural modernization create significant challenges in terms of setting up an effective social protection system for China's numerous forestry producers, it is recommended that policy-makers study the issue and formulate a new forestry social protection policy to be integrated into the national social protection agenda.

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## 6. Conclusion and policy recommendation

The social protection system in China is being reconstructed. Before the 1978 reforms social welfare such as medical care, education and urban housing were provided by the state; in rural areas the collective economy had a major social protection element and rural medical care covered 90 percent of China's villages. Following the decline of the rural collective economy and social protection system, the market-oriented reforms included implementation of the rural household contract responsibility system; farmers returned to land they had owned previously and social protection returned to its family basis, but forestry workers had very limited social security. Since the 1990s China's urban and rural social protection systems have been developing rapidly, and in recent years a more equitable and unified urban and rural social protection system has been introduced.

In the forestry sector social protection consists of two parts, one related to workers in state-owned forestry enterprises and the other to farmers who manage forests and produce forest products. The former enjoy the same social protection policies as other state-owned enterprises; the latter have two sources of social protection: i) the national social protection policy, of which the new rural medical insurance is an example; and ii) the forestry-related social protection policy, of which the CCFP subsidy and public financial support for insurance are examples.

To achieve sustainable development, policies relating to natural resource sectors such as forestry and agriculture include embedded social protection measures.

The social protection measures in China's forestry policy include insurance subsidies, ecological settlement, technical training and poverty alleviation. For the past 20 years forestry social protection has been closely connected with forestry production and ecological conservation. With the improvement of pensions, healthcare and other social benefits, this function of the forestry policy could tend to weaken; but because the poverty status of the forestry sector has not changed much, it is likely to continue for some time.

China's social protection and forestry policy are complementary. The broad-based social protection policy is the foundation for sustainable forest management in that it provides basic medical, pension and education assistance for people dependent on forests. And forests have a major role in the livelihoods and food security of people dependent on them: by providing food, energy and incomes, for example, they help people to manage risks and reduce vulnerabilities.

Although it is developing rapidly, social protection in China is still at a low level and problems such as narrow coverage, large gaps between rural and urban areas, regions and sectors persist; in rural areas, poverty induced by burdens such as illness and high tuition fees is common. The poverty status of forest regions and forest-dependent populations has not changed fundamentally, and the risks and vulnerability caused by the forestry policy and uneven implementation cannot be entirely avoided. Forestry social protection still has a long way to go.

As the Chinese social protection policy and mechanisms evolve, globalization, urbanization, industrialization and agricultural modernization will result in major risks and uncertainty for forestry producers. And because the forestry sector is closely linked with natural resources, the risk of natural shocks and vulnerability to long-term poverty continue.

For this reason it is recommended that the current forestry policy be continued and that decision-makers develop and implement an upgraded forestry social protection policy as part of the national social protection agenda.



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## References

- Bennett, M., Xie, C., Hogarth, N., Peng, D. & Putzel, L. 2014. China's Conversion of Cropland to Forest Programme for household delivery of ecosystem services: How important is a local implementation regime to survival rate outcomes? *Forests* 5, pp 2345–2376. Doi:10.3390/f5092345
- Cao, L.F. 2014. *Study of farmers' forestry production behaviours and influencing factors after the Collective Forest Tenure Reform: a case from Hunan province*. Ph.D. dissertation, Beijing Forestry University.
- Chen, S.H, Li, L.Q. & Zheng, X.L. 2009. Sixty years of construction and reform: rural social security mechanism from backward to modern. *Study of Contemporary Chinese History* 16(5):137–144.
- FEDRC [China National Forest Economics and Development Research Centre]. 2013. *Monitoring report on social-economic impacts of key forestry programmes, 2013*. Beijing, China Forestry Publishing Press.
- FEDRC. 2014. *Monitoring report on social-economic impacts of key forestry programmes, 2014*. Beijing, China Forestry Publishing Press.
- Finance Department, Xianggelila County. 2011. *Agricultural public finance policy brochure, 2011*. Xianggelila county, Yunnan Province.
- Gu, Z.B. & Wang, Y.H. 2014. Monitoring report on socio-economic benefits of the natural forest protection programme in sample counties. In: *Impacts, experience and outlook of the coordinated development of eco-friendly forestry and livelihood-oriented forestry*. CIFOR website and China Forestry Publishing Press, 2016; FEDRC and CIFOR co-publication.
- ILO [International Labour Organization]. 2015. *World Social Protection Report 2014/15: Building economic recovery, inclusive development and social justice*. Available at: [http://www.ilo.org/global/research/global-reports/world-social-security-report/2014/WCMS\\_245201/lang--en/index.htm](http://www.ilo.org/global/research/global-reports/world-social-security-report/2014/WCMS_245201/lang--en/index.htm)
- Liu, C., Li, C.J., Xu, Z.J., Liu, H., Tian, H. & Wu, L.L. 2014. Research on China's forestry public finance. *Forestry Economy* 1:64–79.
- Li, Y. S. 2002. From differentiation to integration: the origin, reform and prospects of China's dual social security system. *Teaching and Research* 8:17–22.
- Ministry of Human Resources and Social Security. 2015. *Annual report on China social insurance development in 2014*. Beijing, China Labour and Social Security Publishing press.
- State Council. 2011. *China's rural poverty alleviation and development programme [2011–2020]*. Beijing.
- State Council. 2014. *Comments on service work for migrant workers*. Beijing.
- State Council. 2015. *Opinions on full implementation of serious illness insurance for urban and rural residents*. Beijing.
- State Forestry Administration. 2014. *Brief progress report on 2013 collective forest tenure reform*. Beijing.
- State Forestry Administration. 2015. *China forestry development report, 2015*. Beijing, China Forestry Publishing Press.
- State Statistics Bureau. 2014. *Statistical bulletin of national economic and social development, 2014*. Available at: [www.stats.gov.cn](http://www.stats.gov.cn)
- Tang, J. 2014. From social security to social protection: Evolution of social policy ideas. *Social Science* [10]: 56–62.
- Wang, L. 2012. *Success cases and good practices in forest farmer cooperative organizations in China*. Rome, FAO.

- 
- Xie, C., Peng, W., Liu, J.J., Jiang, X.L., Li, F.F. Li, B.Y. 2012. Monitoring report on social-economic impacts of CCFP. In: *Monitoring report on social-economic impacts of key forestry programmes*. Beijing, 2012, China Forestry Publishing Press.
- Xie, C., Gu, Z.B., Zhao, J.C., Zhang, S., Yu, T. & Peng, W. 2014a. Ten-year review of impact monitoring and assessment of China's key forestry programmes – outcome, experience and outlook. *Forestry Economy* 1:10–21.
- Xie, C., Gu, Z.B., Zhao, J.C., Zhang, S., Yu, T. & Peng, W. 2014b. A decade of monitoring and assessing the evolution of China's key ecological programmes. In: *Impacts, experience and outlook of the coordinated development of eco-friendly forestry and livelihood-oriented forestry*. CIFOR website and China Forestry Publishing Press, 2016; FEDRC and CIFOR co-publication.
- Xie, C., Zhang, K., Peng, W., Wang, J.N., Liu, J.J., Jiang, X.L. & Li, B.Y. 2015. Policy trends and demand analysis of CCFP in transition – based on the monitoring results of CCFP social economic impact monitoring. *Forestry Economics* 6: 16–22.
- Yan, Q.H. & Wen, S.J. 2014. Research on community poverty and forest resources allocation – the case of Maku village of Jinping county. *Green Technology* 3: 246–249.
- Yu, T., Xia, Y.F. & Tang, X.B. 2014. Social economic impact of NRP, 2014. In: *Monitoring report on social-economic impacts of key forestry programmes*. Beijing, 2014, China Forestry Publishing Press.
- Zhao, P.H. 2009. *Analysis and governance vulnerability of rural poverty in minority nationality regions*. Minzu University, China [MA thesis].



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ISBN 978-92-5-109998-8



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I8046EN/1/11.17