AGENCE FRANÇAISE DE DÉVELOPPEMENT

International Labour Organization

Social Protection and Climate Change

How are rural workers and residents in China faring with conservation efforts?

In China, there are big efforts to combat deforestation, with logging and other restrictions placed on large swaths of land. Nearly a million workers in state-owned forest enterprises lost their jobs, but got help with job training and placement services. Other rural residents received cash to perform conservation activities.

1

China's forests are threatened by human activity, jeopardizing their ability to sequester carbon and combat soil erosion.

China's forests are important for capturing carbon from the atmosphere and fighting soil erosion. But for decades, agricultural development and timber harvesting destroyed this previous resource. Deadly floods linked to deforestation killed thousands in 1998.

2

A logging ban was enacted for the most threatened areas, laying off one million state forest workers.

In 1998, the Government enacted a logging ban across newly protected lands. Nearly one million state forest workers were laid off. Another 120 million rural residents were also affected when the new restrictions on land use were put into place.

3

A new set of cash incentives were introduced to complement existing protections for workers.

New forest management opportunities, unemployment protections and state-led active labour market policies assisted many affected workers to find jobs elsewhere. Meanwhile, some 32 million rural households began receiving cash to perform conservation activities.

4

Large swaths of land were reforested, but welfare impacts for workers and residents in protected areas are largely unknown.

In addition to protecting existing forests, 27 million hectares of agricultural and barren land were reforested. As China embarks on other ambitious economic restructuring with impacts for climate, more can be done to examine the projected and real impacts on workers and others affected.

1 Invaluable forests threatened.

From the 1950s, China has experienced a considerable reduction in its otherwise rich and ecologically diverse forestlands. The forests serve several key environmental management functions, including the capture of carbon dioxide from the atmosphere, prevention of soil erosion and flooding.

But clear-cutting for agricultural development, timber harvesting and other human activity destroyed much of the natural forests in previous decades. That deforestation has led to soil erosion, most severely in the Yangtze and Yellow River basins, leaving the area and its residents increasingly prone to flooding following heavy rains. From 1950 onward, the incidence of natural disasters in the region increased, until in 1998 when a series of floods in the Yangtze River valley claimed the lives of over 3,000 people and resulted in more than 44 billion Yuan (US$ 12 billion) in property damage and lost production.

The wooded watersheds of the Yangtze and Yellow Rivers also provide crucial carbon sinks that capture and sequester carbon dioxide (CO_2) from the atmosphere, reducing greenhouse gasses and helping to roll back the effects of global climate change. In 1998, the Government began large-scale efforts to reforest certain areas of the Yangtze and Yellow River basins, along with other areas, to combat the soil erosion and resulting floods that threaten local communities.

The Government has also made reforestation one of the pillars of its efforts to reduce CO_2 in the atmosphere and help mitigate climate change as articulated in China's Intended Nationally Determined Contributions (INDCs) submitted to the 21st session of the Conference of the Parties (COP21) to the United Nations Framework Convention on Climate Change (UNFCCC) in December 2015 in Paris. But to rebuild considerable swaths of the country's forest, the Government would take ambitious measures, affecting millions of residents who rely on timber harvesting and processing and other forest activities to earn their living.

In some cases, deforestation in China has led to soil erosion and deadly flooding, killing thousands.

Map of Yellow and Yangtze River basins, areas prone to deforestation-linked flooding marked.

Map adapted from BBC News following flooding in China in 1999. Available at: http://news.bbc.co.uk/2/hi/asia-pacific/413717.stm

2 An ambitious conservation action.

Beginning in 1998, the Government imposed bans on logging in natural forests along the Yangtze River and Yellow River basins. As part of this plan, the Forest Conservation Program (FCP) was launched to provide incentives for individuals to comply with the ban and to reorganize the country's large publically-organized forest industry to shift away from timber harvesting and processing towards forest management activities in those areas targeted for conservation.

At its launch, the FCP was ambitious in terms of the amount of land targeted for conservation. Its objective was to halt or reduce timber production by 2010 in the target areas, and conserve about 90 million hectares of existing natural forest. It also sought to reforest an additional 31 million hectares of then-barren but forest-suitable land through rejuvenation activities, including aerial seeding and manual planting of trees.

The FCP is administered by the State Forestry Administration. The initial pilot phase began in 12 provinces and autonomous regions in 1998. Between 1998 and 2000, some 22 billion Yuan

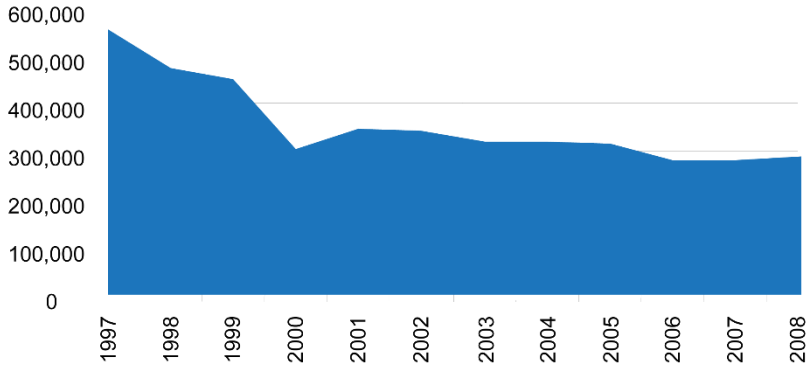
(US$ 3.4 billion) were allocated to the FCP by the State Council, allowing the addition of five more provinces to the program before the year 2000. Another 96 billion Yuan (US$ 14.8 billion) was committed by the State Council to finance the program from 2000 to 2010.

In the most stringent of its provisions, the FCP banned all commercial logging in the Yangtze and Yellow River watershed areas in an effort to conserve over 61 million hectares of forest, bringing to a halt the regional production of more than 12 million cubic meters of annual timber harvest and processing.

Much of the FCP's financial resources went in the form of subsidies to state forest enterprises, designed to offset their revenue losses from reduced or halted timber production. Local governments also received funds from the central government to help state forest enterprises workers who were laid off from their harvesting and processing jobs as a result of the restrictions. Across China, the number of people working in the forest enterprises dropped from almost a million in 1997 to just a quarter of that in 2010, affecting nearly 700,000 workers over the preceding decade. Meanwhile, a total 120 million local people, many of whom had previously carried out small-scale agricultural and other activities in newly protected forests, were affected by restrictions in the targeted rural areas.

Following new restrictions on logging, related employment in target provinces dropped.

Employment in state-owned forestry enterprises in Heilongjiang province (number of people), by year.



Source: Edstrom et al., 2012, "The Natural Forest Protection Program in China: A Contingent Valuation Study in Heilongjiang Province with data from China's Forest Statistical Yearbooks, 1997-2008."

3

Assistance for affected livelihoods.

Some assistance to facilitate the move toward more sustainable economic activities in designated FCP areas was put into place for employees of the public forest companies and other affected rural residents.

JOB PLACEMENT SERVICES

In 1998, the Government launched the Urban Employment and Reemployment Promotion Programmes (UERPP), which provides subsidies to social insurance contributions and other incentives for businesses to hire and for workers to undergo re-employment training.[1] Within the public forest sector itself, job placements were made possible largely by the creation of Forest Protection Units designed to manage the newly designated ecological forests. These units were staffed by workers who had previously worked in the FCP areas in logging and related processing activities. In their new jobs and salaried by the FCP, they worked to professionally conserve and replant the ecological forests. As part of the UERPP, recruitment offices were set up in the forest companies to help workers find other local jobs, as well, in tourism, construction, or transportation, or jobs in the Eastern provinces where there were manufacturing opportunities, provided workers were willing to migrate to those areas. There was

WHAT YOU NEED TO KNOW

- *Deforestation in China has led to soil erosion and flooding, claiming lives, damaging property and productivity.*
- *The Government began a conservation push with new rules prohibiting activities that threatened forestlands.*
- *Nearly 1 million state forest workers lost their jobs, and 120 million other rural residents had their livelihoods affected by the new policies.*

[1] The Chinese welfare system has a historically dual structure with provisions typically falling into one of two categories: urban or rural. Employees of state-owned enterprises in China are eligible for "urban" benefit schemes, sometimes despite the location of their workplace.

also support available for those wishing to start their own businesses.

EMPLOYEE RETIREMENT

For those exiting the labour force, workers in state-owned enterprises were enrolled in pension schemes for the "urban" working population. Once reaching pensionable age, they would begin to receive pension benefits from these schemes. Some who retired before reaching pensionable age could also take advantage of a lesser pension benefit paid directly by their former employer, or receive a lump sum severance disbursement from their former employer. By 2002, four years following the inauguration of the logging ban, around two thirds of affected workers had either been transferred to other jobs within public forest sector, placed in jobs in other sectors of the economy, or retired.

UNEMPLOYMENT BENEFITS

For those still unemployed and looking for work, as former employees of state-owned enterprises some unemployment protection benefits were available through the "urban" welfare system, which served to replace at least somewhat the protections workers had enjoyed during employment, including health insurance. The FCP provided some financial support to local governments to provide these benefits, as they were faced with severely increased demand following the logging bans and ensuing economic transformation, particularly in districts where the local economy had been heavily reliant upon forestry activity.

SUPPORT FOR OTHER AFFECTED GROUPS

While the FCP articulated provisions for displaced workers and allotted resources to finance them, it did not include offsetting measures for other rural households. A total of 120 million rural residents were estimated to be affected by the new restrictions on logging in FCP target areas. These residents were confronted with new restrictions on cutting firewood, conducting agricultural activities, or performing other forest-related economic activity also prohibited by the FCP. This translated into increased tangible costs in foregone crops, purchasing non-wood energy sources and upgrading cooking and other equipment to use with new energy sources. For these residents, the Sloping Land Conversion Programme (SLCP) offered some offsetting support, although not without conditions.

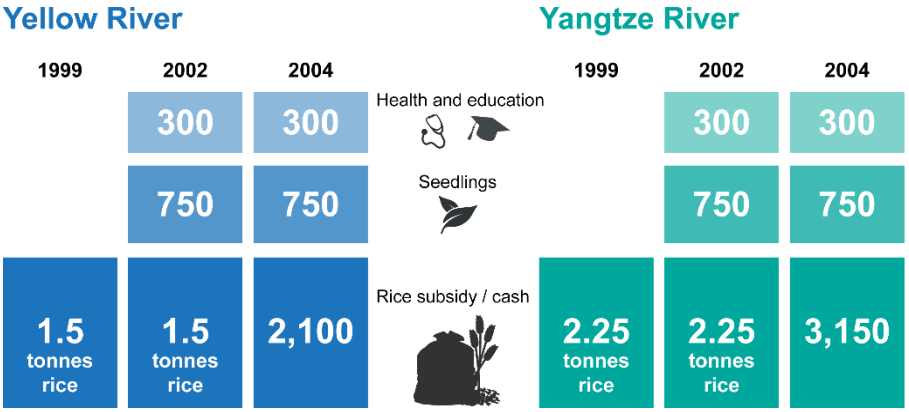
RICE SUBSIDIES

From 1999 to 2002, the rice subsidy was the only form of compensation available through the SLCP. The amount of rice provided through the program per household was often greater than the average household production due to a national supply surplus that exceed demand in the late 1990s. This made SLCP participation attractive even for many rice-growing households. Surveys conducted on revenues from farming in SLCP provinces suggested that SLCP participation was actually more lucrative than farming for many households.[2]

Unlike the FCP, participation in the SLCP was, in theory, voluntary, provided participants lived in one of the 25 target provinces and were able to carry out conservation tasks like planting and nursing trees. But many participants lived in areas with new restrictions on forest activities and, therefore, more limited income-earning

Grants were added to promote health and education and to offset seed purchases. Rice was entirely converted to cash in 2004.

SLCP transfers and values, by region and year. Figures in Chinese Yuan unless otherwise indicated.



Source: Delang, C. O., W. Wang, 2013, "Chinese forest policy reforms after 1998: The case of the Natural Forest Protection Program and the Slope Land Conversion Program."

[2] According to surveys, in 1999, revenues from farming in Shaanxi province were 645 Yuan (US$ 99) per hectare and 2,865 Yuan (US$ 440) in Sichuan. Meanwhile, the value of rice subsidies received in these provinces was 2400 Yuan (US$ 369) and 3450 Yuan (US$ 530) per hectare, respectively.

opportunities, leaving them little choice but to retire their farmland and collect the subsidies.

The Government provided 1.5 metric tons of rice per year for each hectare of cropland repurposed by program participants for reforestation in the Yellow River watershed, and provided a higher subsidy of 2.25 metric tons of rice per year for each hectare in the Yangtze River watershed, where the agricultural production yields of farmers had typically been higher.

Depending upon the type of regeneration activity carried out by participants as a condition of their eligibility (conversion of their farmland into grasslands, economically viable trees growing fruits or nuts, or purely ecological trees), compensation would last for two, five or eight years, respectively.

CASH TRANSFERS

Beginning in 2002, the Government introduced several complimentary cash compensation incentives, all of which conditioned upon the performance of conservation activities. An additional 300 Yuan (US$ 46) per hectare per year, known either as the "subsidy for living standard" or "education and medical subsidy," was introduced. The Government also began to provide 750 Yuan (US$ 91) per hectare exclusively for the purchase of seeds and other supplies required to perform afforestation. (In some cases, these supplies are furnished in-kind by local authorities or by private companies if commercial trees are planted, bearing fruits or nuts, provided the harvest is sold back to the company.)

In 2004, the remaining rice subsidy component was replaced entirely with an additional cash compensation on top of the yearly 300 Yuan (US$ 46) per hectare "subsidy for living standard" and seedling reimbursement schemes, which both remained in place. Instead of the 1.5 metric ton of rice, participants received 2,100 Yuan (US$ 322) per hectare of land reforested in the Yellow River watershed and approximately 3,150 (US$ 483) in the Yangtze River watershed.

The compensation program was initially slated to end in 2007. However, because of concerns over the viability of seedling forests and the continuing needs for land management services by individuals, the program was extended by another eight years, combining the minimum subsistence subsidy with a cash transfer of approximately half of what was previously paid, or 1,050 Yuan (US$ 161) per hectare in the Yellow River watershed and 1,575 Yuan (US$ 242) in the Yangtze watershed after 2007.

Empirically, program participants were attracted in large numbers by the SLCP's food and cash incentives. Between 1999 and 2008, the SLCP involved 124 million people or 32 million households in reforestation and conservation activity

4 Impacts and way forward.

Both China's FCP and SLCP have, together, contributed to a vast reforestation of agricultural or otherwise suitable, barren land in China. Compared to its ambitions of conserving 90 million hectares of existing natural forest and reforesting 31 million hectares of additional land, the country was able to reforest nearly 27 million hectares of former farmland and deforested areas as part of its efforts—a massive reversal of the rapid deforestation experienced over decades prior.

Protections extended to affected workers were in part made possible thanks to China's public organization of its timber harvesting and processing sectors, as well as the ensuing forest management industry that sprung up following the inauguration of the FCP. China's state-owned enterprises employ roughly half of the country's 750 million strong workforce. This has allowed the Government to use tools that others cannot in order to offset the employment impacts of some of its recent economic and environmental reforms.

However, as the share of gross domestic product to which state-owned enterprises contribute shrinks

WHAT YOU NEED TO KNOW

- *Four years on, two thirds of nearly a million affected workers had found other jobs or were retired.*
- *State-run Urban Employment and Reemployment Promotion Programmes (UERPP) offered placement and training.*
- *The Government also launched financial incentives for 32 million rural households to carry out conservation activities.*
- *Nearly 27 million hectares of former farmland and deforested areas have since been reforested.*

(representing around 80 per cent of China's GDP in 1979 versus just 18 per cent in 2012), other mechanisms will play an increasing role in providing support to workers affected by environmental policies.

The transition was also facilitated by China's existing unemployment and other social protection provisions, which provided unemployment benefits, reemployment services, pensions, social welfare and other support to workers affected in the conservation effort.

China's social protection system will be instrumental moving forward as the country takes aim at other sectors of the economy in its efforts to address rampant air pollution and other environmental problems.

Following the COP 21 hosted in Paris, the Government announced in January 2016 a moratorium on new coal mining permits and announced plans to close roughly 4,300 existing mines in the years ahead. In February, the Government also announced a financial commitment of some 100 billion Yuan (US$ 15.3 billion) to support an estimated 1.8 million workers affected by planned structural reforms in both the coal mining and steel production sectors, an equivalent of roughly 56,000 Yuan (US$ 8,500) per affected worker. Provisions similar to those used for FCP-affected employees are envisaged, including subsidies for enterprises to create new jobs for laid-off workers, employment placement and training services, early retirement arrangements, and public works programs.

The Government has also announced intentions to continue its fight against climate change with a pledge of nearly 7 per cent of the 2014 public budget, 138 billion Yuan (US$ 23 billion), to support climate change adaptation and mitigation efforts, including more conservation efforts and returning farmland to forests.

Moving forward, it would be useful to develop the tools necessary to measure the net welfare effects of many policies that, on the one hand, limit earnings potential through land use restrictions and, on the other, provide new earning opportunities through conservation activities. These tools will be needed to assess the relevance and application of the ILO's guidelines for a "just transition" and provisions for offsetting social impacts of climate policies and climate change effects alluded to in the Paris Agreement.

Guidelines for a "just transition"

In 2015, a tripartite meeting of experts set out to develop a set of guidelines to promote the move toward greener economies and societies while protecting people in the transition. These policy responses were proposed and negotiated by ILO constituents Brazil, Indonesia, Germany, Kenya, Mauritius, Turkey, South Africa, the United States and elsewhere. The second guideline related to social protection policies (para. 34) reads, "Integrate social protection into policy measures and responses to environmental impacts and the challenges of the transition for those likely to be negatively affected, in particular workers largely dependent on natural resources or facing major structural changes."

The guidelines were later adopted by the ILO Governing Body in November 2015.

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