

## CHINA (Forest Ecological Compensation Scheme)

### *ECO - Forest Ecological Compensation National Programme, China*

#### SUMMARY

China Government Forest Ecological Compensation Programme (FECP), that provides financial assistance to the managers of “ecological forest”. The process to establish a Forest Ecological Compensation scheme began in the late 1980s. Twenty years later, a source of funding was finally agreed upon and a Fund was created. While the original intention was to provide the necessary funds through an environmental use-fee, the scheme is now financed from a central budget allocation. The programme represents the beginning of a shift in Chinese environmental management policy as it provides support to managers of forests with special ecological interest and with stricter land management requirements. In principle, this support should constitute compensation to the forest managers for the environmental services they are providing, or for their forgone land use options. However the extent to which the current programme achieves this is contentious.

#### MATURITY OF THE INITIATIVE

Ongoing. The program begun for trial in 2001 and official implementation started in 2004.

#### The way to Ecological Compensation in China

1989- beginning of the interest in establishing a compensation scheme for the environmental services provided by particular forests;  
 1994- attempt to create a system of environmental user fees (involving state water reservoirs, recreation and hunting), but due to high transaction costs and low collection potential, it was not approved.  
 1998- another financing option was put forward- the collection of a 3% share of all public investment in infrastructure- which did not get approval either;  
 2000- government agreement to assign a share of the public budget to the creation of the Forest Ecological Compensation Fund  
 2001- Forest Ecological Benefits Subsidy Funds- trial phase begin.  
(after Changjin Sun and Xiaoqian Chen,2002)

#### DRIVER

Interest in developing a Forest Ecological Compensation Programme (FECP) begins in the late 1980s, after decades of forest degradation (mainly for timber) which was considered responsible for higher soil erosion, desertification, grassland degradation and more frequent environmental disasters (such as floods, landslides (particularly increasingly severe mountain mudflows)).

#### STAKEHOLDERS

##### Supply

*Private, public and commonly owned land*

Over a decade ago, China began zoning its forests according to their ecological or productive potential and on this basis determining types of management (Specialized Forest Management). The Ecological Compensation scheme applies to “protection forests” (forests located in the upper catchments and along riverbanks of important rivers, natural forests in dry regions, and logged over degraded lands in mountainous areas) and “special-use forests” (nature reserves, heritage forests), designated as “ecological forests”.

During the trial phase (2001-2004), 200 million mu<sup>1</sup> (13 million ha) of key ecological forests were designated eligible to enter the programme. These include mainly water and soil conservation forests

<sup>1</sup> Mu is a Chinese area unit- 15mu = 1ha;

and correspond mainly to small, collectively owned forests (representing 64% of the land and 97% of the forest plots). State forests, like nature reserves and state forestry farms account for 36% of the eligible area and for the remaining 3% of the plots.

*Types of forest eligible during the trial phase (2001-2004)*

Total: 0.2 billion mu (13 million ha) of key ecological forests

Protection Forests (168,4 million mu)  
61% water conservation forests  
29% soil protection forests  
10% sand control and riparian protection

Special-use Forests (31,6 million mu)  
34% natural defence forest  
59% nature reserves  
7% others (seed trees, scenic forest and memorial forest)

*Source: Changjin Sun and Xiaoqian Chen (2002)*

During full implementation the programme will cover 400 million mu (26 million ha).

#### **Demand**

*National government*

#### **Intermediary**

Local forestry agencies are in charge of implementing and distributing compensation/subsidies to participants.

#### **Facilitator**

The State Forestry Administration and Ministry of Finance (programme funds come from allocation of fiscal budget). Local and provincial governments are encouraged to provide matching funding.

## **MARKET DESIGN**

### **Service**

*Water quality protection and flow regulation; Erosion control*

*Biodiversity enhancement*

*Landscape beauty*

(no provision is made for carbon sequestration or storage)

### **Commodity**

Forest Management Contract that include:

*Conservation and protection of existing ecosystems, for example through forest fire risk-management measures;*

*Rehabilitation of existing ecosystems for protection, including reforestation*

*(Improved management practices, through sustainable management of forest. In theory this is also an option, however extraction of forest products was absolutely forbidden during the trial phase, unclear whether this has been changed now that the programme has began official implementation).*

### **Payment Mechanism**

*Intermediary-based transaction (local government) internal trading: central government allocates funding for appropriate protection and management of "ecological forests".*

### **Terms of Payment**

The national rate is 5 Yuan/mu/yr (or US\$ 9/ha/yr). Although initially this was intended to be a compensation for the environmental services provided and forgone land use benefits, in practice it is too

low for this and is instead perceived as a subsidy for appropriate forest management. Funds are to be spent as follows (Sun Changjin and Chen Liquiao, 2005):

- a) state owned- full time rangers and guards, technical and managerial staff;
- b) key ecological forests inside nature reserves- nature reserve administration keeps 0.5 yuan/mu for monitoring and administration, while the remaining 4.5 Yuan/mu is channelled to farmers who manage these forest.
- c) Village-owned common forests: compensation is distributed through the individual households but forest management is the responsibility of full-time guards paid.
- d) Individual forests: owners/administrators receive the full amount of the compensation and assume full responsibility in establishing, tending, protecting and managing these forests.

### Funds Involved

During the trial phase (2001-2004), the annual budget was 1 billion yuan (US\$125 million). This amount was doubled (2 billion yuan) once the full implementation phase began (as the area to be covered by the programme, doubled).

## ANALYSIS OF COSTS AND BENEFITS

### Economic

Costs for the participants:

Stricter land use restrictions result in loss of income from timber, charcoal production and bamboo and fuel wood extraction. According to Zuo Ting *et al.* (2005) the compensation received is considerably below forgone forest income and does not compensate for increased fuel wood expenses.

### Environmental

The programme has resulted in extra protection to these ecologically important and vulnerable forestlands, both through stricter monitoring of land-use restrictions (mainly logging) and the provision of incentives for appropriate management.

*Additionality:* Like in other national programmes worldwide, and the Chinese Sloping Lands Conversion Programme (see separate case profile), there are uncertainties about the long-term additionality, particularly when the scheme includes reforestation, which leaves the option of future harvest, once the programme has ended and subsidies have ceased. As Changjin Sun and Xiaoqian Chen (2002) highlight, "there is a long time lag for most forests before they reach commercial production and landholders are inclined to receive the subsidy now, leaving the hard decision between commercial use and ecological protection for the future".

### Social

Once the central government has stipulated the extent of forest covered by the programme, local authorities and village committees are responsible for selecting which particular forests to enrol in the programme. This usually follows an "entire village" or "entire watershed" approach, which does not leave much room for individual decisions on whether or not to participate in the programme.

Studies have found that in many cases, participants are not very clear about what is required of them and what their rights are (Changjin Sun and Xiaoqian Chen, 2002; Zuo Ting *et al.* 2005). As a result, participants have realised they are worse-off only when the programme is already under way.

## LEGISLATION ISSUES

The Forest Law (1998) legitimises the creation of the Forest Ecological Service Compensation Fund "to finance the establishment, tending, protection and management of forest resources and trees in protective forests and special use forests that provide ecological services" and, states that the managing entities of these forests are entitled to subsidies from the Fund.

In order to make the programme a long-term and self-reliant initiative, the creation of a general "environmental tax" has lately been discussed. Through the creation of this tax, users would acknowledge the importance of the environmental services being provided and higher collection levels would facilitate compensation levels high enough to reimburse forgone benefits and increase responsibility for environmental protection. The creation of this new tax is supported by the State

Environmental Protection Administration (SEPA), which considers that the creation of a “standard for ecological compensation acceptable by all people is of critical importance” (CHM China, 2006).

## MONITORING

Local government authorities are responsible for monitoring

## MAIN CONSTRAINTS

Although the main goal of this programme has been to provide a compensation for the environmental services provided, in practice the amount offered reflects neither the value of the services, nor the opportunity cost for the participants, remaining only as an incentive to encourage the practice of appropriate ecological management of the designated forests.

## MAIN POLICY LESSONS

According to Changjin Sun and Xiaoqian Chen (2002), the payment rate was set based on the available funds and desirable scale for the pilot phase. While the State Council attributed a budget of 1 billion Yuan to the trial phase, the Ministry of Finance decided upon 0.2 billion mu as reasonable scale for the trial phase.

In the case of the villages surveyed by Zuo Ting *et al.* (2005) in the Hunan Province, following the trial period, some adjustments were discussed in terms of:

- ensuring more participatory definition of the areas to enter the programme;
- allowing sustainable harvest of Non-timber forest products;
- and adjusting the payment levels: willingness to accept studies were made to assess a more suitable compensation level and an addition in-kind payment was also discussed (investment in biogas as a replacement for the forgone use of fuel wood)

## OTHER INFORMATION

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## LINKS