

CHINA-Sloping Lands Conversion Programme

"Grain for Green"

SUMMARY

National government programme through which farmers MUST set aside erosion-prone farmland within critical areas of the watershed of the two largest rivers in China: the Yangtze and Yellow river (sometimes called Huanghe river). Compensation is given in cash and in kind. Total investment is US\$ 4.3 million a year.

MATURITY OF THE INITIATIVE

Ongoing: pilot run in 1999, full implementation since 2002.

DRIVER

After a period of very serious flooding in 1998 and increasing demand for ecological services, the government began a major ecological restoration plan involving six key forestry programmes; the SLCP is one of these.

STAKEHOLDERS

Supply

Private landowners: farmers on erosion-prone sloping land (slope greater than 25 degrees) within the upper watershed of the Yangtze river and in the upper and middle parts of Yellow river, covering a total of 50 million ha and spanning 1,710 counties in 25 provinces. In principle farmer participation is voluntary but in practice local governments often focus on an "entire village" approach.

Demand

National government.

Intermediary

Local government offices are in charge of transferring the funds from central government to the households.

Facilitator

The State Forestry Administration, the Ministry of Finance and the State Development and Planning Commission.

MARKET DESIGN

Service

Erosion and sedimentation reduction.

Commodity

Rehabilitation of degraded ecosystems for protection through "ecological tree" planting.

Reforestation for commercial plantations with "economic trees" (producing nuts or fruits and for timber).

Payment Mechanism

Intermediary-based transaction (local government) internal trading: central government allocates funding for compensation to farmers setting-aside part of their cropland, local government offices facilitate implementation.

Terms of Payment

In cash, regular: 417 Yuan/ha/yr (US\$ 50) for farmers in the Yangtze River Basin and 290 Yuan/ha/yr (US\$ 36) for those in the Yellow river basin.

In cash, one-off: seed and planting subsidy: one-off 750 yuan/ha (\$US 93).

In kind, regular: grain rations : 300kg per year per ha of set-aside land in Yangtze River watershed and 200 kg/ha/yr for the set-aside areas along the Yellow River.

Both cash and grain payments, are awarded for five years for production trees and eight years for protection trees.

Funds Involved

For the period of 2000-2010 total budget is 350 billion Yuan (about US\$ 43 billion). Between 1999 when the program began, and 2005, the central government provided 103 billion yuan (US\$12.8 billion). (SLCP Office, 2006, cited in Jin 2006).

ANALYSIS OF COSTS AND BENEFITS

Economic

Opportunity costs: According to research by Xu Jintao and Cao Yiyang, [cited in Changjin and Chen, 2005] in most of the regions where the programme is operating, the grain ration received per ha is higher than the average grain yield in normal years. In addition, productivity on plots remaining under production seems to increase - therefore, the level of national production of grain has not been affected by this set-aside scheme.

A cost effectiveness and sustainability analysis conducted by Emi Uchida, Jintao Xu, and Scott Rozelle, (cited in Gee 2006) concluded that "the results imply that on average the program is enrolling plots with positive environmental benefits and relatively low opportunity costs."

Environmental

Up to 2005: 9 million ha of sloping land has been converted into forestland and tree plantations. However, the survival rate of the trees planted by the programme can be very low (about 100 trees out of 400,000 plus trees planted in Qingjian County of Northern Shaanxi Province), in places where the permanently dry layer of the loess (about 2 metres deep) acts as a death trap for deep-rooted vegetation. Changjin and Chen (2005)

According to observations made by the Sichuan Agricultural University, silt run-off from converted lands is 22-24% less than from comparable farming lands in Tianquan County. Changjin and Chen (2005).

Expected environmental benefits are: to control soil erosion on 340 million mu (about 23 million ha), stop desertification in 400 million mu (about 27 million ha), which will reduce sediment into the Yangtze and Huanghe Rivers by 260 million tonnes.

Social

The program is carried out mainly in poverty-stricken mid-west China and involves 90% of China's poor people (SLCP Office, 2006, cited in Jin 2006). Improvement of the living conditions of the farmers is a large component of this programme (i.e. the programme is a way of achieving distributional objectives). Since 1999, 30 million householders have received compensation in the form of a total of 48 million tons of grain and 17.6 billion yuan (about US\$ 2 billion) in payments. (Gee, C. 2006); other benefits are the release of family labour that can be utilised on other plots or activities.

LEGISLATION ISSUES

Forest Law (1998) and Water Law (2002) formally recognize the importance of compensation for environmental service provision.

MONITORING

Local government offices are responsible for monitoring.

MAIN CONSTRAINTS

Once the programme and payments end, there will little to stop farmers from growing crops again on these lands – It is hoped that i) farmers will develop other activities during the programme which they will then continue afterwards or ii) they will be able to draw enough benefits from the trees planted for the programme.

MAIN POLICY LESSONS

Due to the fact that this programme offers compensation and support to take up forestry, willingness to participate was high, in contrast with the low level of acceptance of the Shelter Belt Programme, which did not provide any such compensation. (Changjin and Chen, 2005)

Weyerhaeuser (2006) identifies the following key policy lessons for the Sloping Lands Conversion Programme:

- *Reasonable incentives are the key to maintaining environmental services over the longer term.*
- *Payment schemes require adequate funding to ensure adequate levels of environmental services:*

- *long-term funding;*
- *sufficient funding to cover the costs of planting high-quality trees and maintaining these, otherwise farmers often revert to agriculture or plant low-quality trees with poor economic and ecological returns;*
- *compensation for opportunity costs of foregone land uses.*

- Clear objectives and evaluation procedures can help allocate scarce financial resources and avoid programme drift and unintended uses of funds- programmes should move beyond paying to restore forest cover and focus more on rewarding the provision of actual environmental service.
- Ensuring stakeholder participation from the beginning can improve acceptance levels, enhance programme design, strengthen links between producers and beneficiaries, lower enforcement costs and improve results.
- Transparency in deciding how payments are calculated and how they are to be used is crucial to gaining public acceptance and maintaining the quality of environmental services.
- Government agencies and local governments should continue facilitating fairer negotiations and effective contracts between producers and beneficiaries, especially as more private payment schemes emerge.



OTHER INFORMATION

After a period of very serious flooding in 1998 and increasing demand for ecological services, the government began a major *Ecological Restoration Plan* involving six key forestry programmes:

- i) Three North and Middle and Lower Reaches of the Yangtze Watersheds Shelterbelts Program: covering 4 million km² (about 40% of China's total land area)
- ii) Sloping Farming Lands Conversion or "Green for Gain" Program
- iii) Desertification control in Beijing city (raise vegetation cover to stop sandstorm problem in the region)
- iv) Natural Forest Protection Program (logging limitations)
- v) Fast-Growing and High Yielding Forest Industrial Base Program in Key Regions (to increase timber production- goal is to produce 133m³ million, which is equivalent to 40% of current domestic demand)
- vi) Wildlife Protection and Nature Reserve Program (10 projects to conserve flagship species and 30 other important forests, Gobi desert and wetlands, to be implemented until 2010)

CONTACT

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LINKS

- http://www.cepf.net/xp/cepf/where_we_work/southwest_china/full_strategy.xml
<http://www.harbour.sfu.ca/dlam/WorkingGroups/Forestry/newsletter4.html>