

# Growing China's great green wall

Chinese authorities are beginning the western phase of the historic and ambitious 'Great Green Wall' (GGW), a 4480-kilometre belt of forest across 551 counties and 13 provinces in north-west, central north and north-east China. Part of broader national environment programmes, it is the world's largest ecological development, and is designed to halt 2460 square kilometres of land being lost annually to the expanding Gobi Desert due to overgrazing, deforestation and drought.

The GGW or Three-North Shelterbelt Reforestation programme, first initiated by Deng Xiaoping in 1978, is to be completed by 2050. The 73-year development is divided into three stages and eight phases, with the new western phase falling under the second stage, concluded in 2001.

Already, the State Forestry Administration (SFA) claims to have planted 24 million hectares of forests across China, resulting in protection of 60 per cent of cultivated land. By 2050, according to plans, a total of 35.6 million hectares – or four million square kilometres – will be afforested.

The Three-North Shelterbelt Reforestation itself is part of a range of six shelterbelt developments throughout China. These include the Programme for Shelterbelt Development along the Middle and Upper Reaches of the Yangtze River, the Coastal Shelterbelt Development Programme, the Farmland Shelterbelt Network in the Plains Areas, the Natural Forest Conservation Programme, the National Programme against Desertification, and the Taihang Mountain Afforestation Programme – covering the boundaries of five provinces: Beijing City, Tianjin City, Hebei Province, Shanxi Province and Henan Province.

More broadly, the Chinese government has been implementing 10 major, national ecological initiatives. These involve highly complex plans for environmental protection and development, within which the government aims to maintain a 'balance between the ecological and economic functions of its forests'. Under these, the SFA's programmes, representing the forestry sector, incorporate conservation action plans for China's Agenda 21 scheme, biodiversity, wetlands and the 'China National Action Plan to Implement the United Nations Convention to Combat



Locals gather at the planting of a new row of shelterbelt trees at a rural village in Shanxi Province. GFA Group

Desertification'. The associated projects have focused on the provincial, county, township and village levels.

The shelterbelts themselves comprise an outer belt between 236 to 538 metres wide, with a fence along the perimeter to restrain sand. Within lies sand-tolerant vegetation, planted in chessboard patterns, creating an artificial ecosystem. A two-metre-wide gravel platform holds down sand while encouraging formation of a soil crust.

By 2010, the shelterbelts are expected to extend from Beijing through to Inner Mongolia, and the government has initiated plans to use a combination of aerial seeding and compensation to farmers to plant trees and shrubs in areas that require closer attention.

A US\$1.2 billion oversight system, consisting of mapping and land-surveillance databases, is to be implemented, and a number of foreign aid agencies are involved in bilateral development co-operation agreements for aspects of the GGW. These include Germany's GTZ, involved with measurement and evaluation in Gansu, Ningxia and Heilongjiang provinces; others reportedly include Japan, Korea and Holland. The World Bank, the

United Nations Development Programme (UNDP) and the UN's Food and Agriculture Organization are also involved.

However, there appear to be some grey areas to the green plans. Since 2001, the authorities have mentioned releasing programme evaluation data by foreign agencies; to date, however, none have been made public. This is because the data apparently do not yet exist.

For example, Hans-Peter Paulenz, GTZ Project Director, indicates the SFA approached GTZ in 1995 to establish matching of remote sensing and on-ground verification of enormous amounts of tree-planting data. However, a decade later, GTZ has not yet been able to complete determination of even tree survival rates.

'Bureaucratic infighting between the SFA and the Three-North Shelterbelt Office (a parallel department set up for management and subsidy distribution for tree planting), and difficulties in controlling operational factors affecting the baseline data recording by relevant local parties have made progress very slow', says Paulenz. No comparison timeline analysis has yet been undertaken as the relevant people have been slow in providing inventory data, he points out.

For organisations such as GTZ, China provides no easy solutions, but 'not doing anything is worse than doing nothing'.

Despite these structural problems, however, the Chinese government has given strong signals that it wants its GGW and other national projects to conclude successfully.

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Workers load tree trimmings from a maturing shelterbelt region in Shanxi Province. GFA Group