

# **China redirects trillions of gallons of water to arid north**

**China is embarking on one of the biggest hydro-engineering projects in world history, but is being forced to navigate some troubled waters along the way, reports Peter Foster in Xichuan.**

By Peter Foster

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Surveying the rubble of their recently demolished village, the huddle of Chinese peasant-farmers is in an openly mutinous mood, their list of gripes and grumbles against the local government spilling out one after the other.

"The land they gave us isn't fit for beggars," spits one old man squatting on his homespun wooden stool, "And the new houses have leaking roofs," adds another, "And there's no security," complains a third, "last week someone stole my chickens."

The men from what remains of Machuan village in Henan, central China are seated at the "ground zero" of China's latest feat of mega-engineering, a project so vast that it dwarfs the Three Gorges Dam in cost, scale and perhaps even controversy.

Scheduled to be finished in 2050, the plan to link China's four main rivers and redirect trillions of gallons of water from China's tropical southern mountains to its arid northern plains will have taken 100 years from conception to completion.

The theory is simple enough – as Chairman Mao Tse-tung observed in 1952: "The south has plenty of water and the north lacks it, so if possible why not borrow some?" – but the reality is a truly daunting tangle of technical and logistical challenges.

The villagers of Machuan, whose houses were bulldozed in August this year, were just the first of more than 330,000 Chinese peasants who will have to be delivered to new homes before the South-North Water Project is complete.

At £37bn the project will cost more than twice as much as the Three Gorges Dam, delivering nearly 12 trillion gallons of water along three networks of tunnels and canals that will branch out into northern, eastern and central China.

Machuan village, and hundreds more like it, have been identified as the necessary sacrifice to create the Central section which, when completed 2014, will carry water 883 miles to the residents of several major northern cities, including Beijing.

Their rough-built houses will be submerged under an enormous reservoir created by an enlarged dam at the confluence of the Han and Dan rivers in central China, which will create the header-tank for the system.

On this autumnal morning, when the quiet of the dawn is broken only by the crowing of roosters and the snuffle of well-fed pigs, it is easy to see why the peasants are reluctant to move.

The land where they have lived for generations is fertile and, to judge by the piles of yellow corncobs in the courtyard homes, their harvests are plentiful.

But despite their complaints, most of the peasants accept that they will have to move in the end, although the road-signs erected by the local propaganda department proclaiming they give their "full support" for the project might be an overstatement.

"We really have no choice, it is for the nation's wellbeing," says 71-year-old Li Fengi who as a young man worked the bellows of his village iron-smelter during Mao's Great Leap Forward, "When the country asks you to make a contribution, then you must do what is asked of you."

But if the peasants are going to make a sacrifice for the national good, then they also want a fair deal on land allocation and an end to the corruption which they all suspect is lining the pockets of local officials charged with overseeing the moves.

As we are speaking, a man from a neighbouring village drives up on his motorbike clutching a petition signed with the smudged fingerprints of all 227 households of Heba.

They demand to know why they are being moved onto land already rejected by two other villages. "It is discrimination," the petition says, "we all refuse to move." Back at the Party headquarters, the deputy-head of the local migration office Liang Zhenpei, warns against listening too closely to the complaints of villagers.

The first moves, he says, were conducted "smoothly, harmoniously" and without trouble. "People naturally have these feelings when they move to a new place," he adds, "There have been some individual quality problems apparently, but in general there have been no complaints." Finding acceptable new homes for more than 300,000 people in a country as densely populated as China is, however, only part of the difficulties facing the designers of the project whose completion date has already been pushed back three times, from 2008 to 2010 and now to 2014.

Critics of the scheme say it is both financially costly and environmentally wasteful, with huge amounts of water lost to evaporation as it travels north in mostly open canals.

Other experts have warned that plans for industrial expansion along the canal's length will mean much of the water will already be heavily polluted with chemicals and heavy metals before it even reaches the thirsty new residential suburbs of Beijing.

But perhaps the "real Achilles' heel" of the project will be its huge cost, making the water prohibitively expensive for Chinese urban consumers, according to James E Nickum of the International Water Resources Association.

When the government tried to put a market price on water in the early part of the decade, public opposition saw the price stalling "well below" the projected cost of delivering water to the capital by the South-North water project, he wrote in the China Economic Quarterly.

Already Beijing and Tianjin's local governments, balking at the putative price of South-North water, is reported to have cut its projected demands from the project.

Given the iron-will of the Chinese Government, there can be few doubts that at least the eastern and central phases of the South-North water project will be completed, despite all the delays and difficulties.

But like the Three Gorges Dam before it, which submerged 11 cities and displaced 1.3m people but is now running at less than 50 per cent capacity because of silting and landslide problems, the question is whether it will have all been worth the cost.

<http://www.telegraph.co.uk/news/worldnews/asia/china/6884433/China-redirects-trillions-of-gallons-of-water-to-arid-north.html>