

The New York Times, June 8, 2006

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# A Sea of Sand Is Threatening China's Heart

By JOSEPH KAHN

MINQIN, Gansu Province, China — China's own favorite military strategist, Sun Tzu, surely would have warned against letting two mighty enemies, the Tengger and the Badain Jaran, form a united front.

Yet a desert pincer is squeezing this struggling oasis town, and China's long campaign to cultivate its vast arid northwest is in retreat.

An ever-rising tide of sand has claimed grasslands, ponds, lakes and forests, swallowed whole villages and forced tens of thousands of people to flee as it surges south and threatens to leave this ancient Silk Road greenbelt uninhabitable.

Han Chinese women here cover their heads and faces like Muslims to protect against violent sandstorms. Farmers dig wells down hundreds of feet. If they find water, it is often brackish, even poisonous.

Chinese leaders have vowed to protect Minqin and surrounding towns in Gansu Province. The area divides two deserts, the Badain Jaran and the Tengger, and its precarious state threatens to accelerate the spread of barren wasteland to the heart of China.

The national 937 Project, set up to fight the encroaching desert, estimated in April that 1,500 square miles of land, roughly the size of Rhode Island, is buried each year. Nearly all of north central China, including Beijing, is at risk.

Expanding deserts and a severe drought are also making this a near-record year for dust storms carried east in the jet stream. Sand squalls have blanketed Beijing and other northern cities, leaving a stubborn yellow haze in the air and coating roads, buildings, cars and lungs.

Prime Minister Wen Jiabao traveled to the northwest in May to offer aid to drought-stricken farmers and order provincial officials to supply more water to Minqin.

But while local officials have tried grandiose projects to rescue the outpost, environmentalists say it will probably have to be at least partly abandoned and returned to nature if the regional ecology is to be restored.

"We must find ways to live with nature in some kind of balance," said Chai Erhong, an environmentalist and writer who lives in Minqin. "The government mainly wants to control nature, which is what did all the harm in the first place."

Government-led cultivation, deforestation, irrigation and reclamation almost certainly contributed to the desert's advance, which began in the 1950's and the 1960's, and has accelerated. Critics warn that some lessons of past engineering fiascoes remained unlearned.

During the ill-fated Great Leap Forward in the late 1950's, Mao ordered construction of the giant Hongyashan reservoir near Minqin, which diverted the flow of the Shiyang River and runoff from the Qilian Mountains into an irrigation system. It briefly made Minqin's farmland fertile enough to grow grain.

But Minqin is a desert oasis that gets almost no rainfall. The Shiyang and its offshoots had been its ecological lifeline. With the available water resources monopolized for farming, nearly all other land became a target for the desert.

Today, patches of farmland that cling to irrigation channels are emerald islands in a sea of beige, an agricultural Palm Springs.

Even the irrigated plots risk extinction. Competing reservoirs on upper reaches of the Shiyang reduced its flow so severely by 2004 that the Hongyashan went dry for the first time since its construction in 1959. It was refilled after Beijing ordered an emergency diversion of water from the Yellow River, which now runs dry through much of the year here in its northern reaches.

Local officials, whose promotions in the government and Communist Party hierarchy depend more on increasing economic output than on improving the environment, have tried desperately to preserve Minqin's farming.

They have pleaded with cities on the upper reaches of the Shiyang to take less of its water. They have also dug wells at a furious pace — 11,000 of them altogether, some reaching more than a thousand feet down.

Minqin also planted ramparts of rose willow, buckthorn and other deep-root trees in a 200-mile file along the desert fronts.

Such solutions have not worked. The trees are now stranded by sand.

Wang Tao, who heads the 937 Project — priority projects are labeled with a 9 — said the only viable strategy to save arid land in Gansu, Inner Mongolia and Ningxia was to move people out, reduce production, form conservation parks and let nature heal itself.

"Minqin is not going to get more water," he said in a telephone interview from his base in Lanzhou. "It needs fewer people."

In fact, a 200-year trend of migration into northern Gansu from overcrowded lands in south and central China has shifted sharply into reverse, with tens of thousands of farmers being relocated, some as far away at Heilongjiang, in the northeast.

Along Minqin's northern frontier, villages like Xiqu, Zhongqu, Shoucheng and Hongshaliang have been fully or partly abandoned. Sand dunes smother empty homes. Olive, plum and date trees are stacked for firewood.

Shen Tangguo reckons that he is the only remaining farmer in his village, Huanghui, which once had several hundred. He carries water by motorcycle from a well a few miles away to irrigate his cotton, which he says is resilient but low yielding.

He has pictures of Mao and Zhou Enlai and more recent Chinese leaders on his walls. But he says he has not seen an official in Huanghui since someone dropped by to collect a road-building tax a few months ago.

"Everyone else left because they have friends who can arrange things," he said. "I don't have any friends."

Mr. Chai, the Minqin environmentalist, grew up north of the city in a village now struggling to survive. His father left the village a few years ago to live with Mr. Chai, who is 44.

Their ancestral home now has two remaining walls and no roof. The local elementary school closed last year; only three children were showing up for class.

The village's decline prompted Mr. Chai to study ecology on his own. He now speaks volubly about the desert ecosystem and writes newspaper and magazine articles calling on the authorities to abandon water engineering projects so his native land has a chance to recover.

But he is not optimistic. Just outside his village is a vast wind-whipped plain where, he said, his father used to fish. It was called Qingtu Lake, one of the largest in China's northwest until the diversion of the Shiyang gave the lake to the Tengger.

Six inches down, the soil remains dark. On the surface, there are shells, fish bones and a snowlike powder left behind by the alkaline waters.

"This is not a natural disaster — it is man-made," Mr. Chai said. "And unless people study the lesson of Minqin, it will repeat itself clear across China."