



## Protecting Human Settlements from Drifting Sand in Cele County, China

The encroachment of deserts on homes, cities and farmland is a challenge faced by most people that reside close to deserts. An example is the Cele County area in the far west region of China, which is characterized by the arid climate of the Taklimakan Desert. People settled here because some of the seasonal rivers provide water to many of the region's oases, making agriculture possible.

Thus, for the longest time, the people suffered the effects of desertification and mobile dunes, and the situation has got worse as the human and animal populations have increased. Higher demands for firewood and fodder hastened the desertification process and threatened Cele town, which had moved three times already.

The regional government decided to take action and, in 1983, launched project 'Experimental Research to Control Drifting Sand of Cele County', implementing a Comprehensive Protecting System. The system forms a series of biological and physical barriers to the movement of sand dunes.

The first barrier is a channel that is followed by a strip of grass and shrubs, and a narrower line of taller shrubs. Then at the border of the agricultural area comes a zone of tall trees serving as a wind break. The community did most of the work in line with the traditional system of voluntary communal work.

In the end there were additional benefits from the Cele project. It not only stopped further desertification, but in fact, pushed back the borders of the desert by about 5 km. The agricultural area increased, as did the income of the inhabitants. To cover the high demand for firewood, the reclaimed land was also planted with trees for this purpose. The trees are guarded to prevent illegal logging. The project's success is evident from the increased quality of life for the whole county and has inspired other endangered regions of China.

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