China and India have been contributing significantly to the greening of the planet. China has contributed to 25% of the increase (of 5.5 mn sqkm), and India 6.6%, according to a global study between 2000 and 2017.

// A UN report has described the measures taken by China to implement

The rehabilitation of forest land in China can largely be attributed to a series of six national forestry programmes which have been implemented since the late 1990s, through which China has planted more than 4 million hectares of forest every year. Between 1998 and 2014, investment across the six programmes is estimated to have reached USD 100 billion and involved the participation of 20% of China’s rural population.

The rapid rehabilitation of forest and landscapes at a massive scale in China proves that ecological restoration of large-scale, complex ecosystems is possible, and can be achieved by human hands. Three-North Afforestation Program (TNAP) was behind this large scale afforestation. The TNAP, which has been ongoing for 40 years, is said to be the world's largest tree-planting project covering more than 95 percent of China's wind-sand damaged areas and 40 percent of areas hit by soil erosion.

According to the assessment, the forest area of TNAP has increased by 21.56 million hectares since 1978. The completed afforestation areas have been up to 46.14 million hectares, amounting to 118 percent of the planned afforestation tasks in the same period. Since 2000, desertification has overall been under control and key areas have been significantly improved, the report said.

In addition, the areas of soil erosion by water in the TNAP regions have been reduced by 67 percent in total. The total value of forest ecosystem services in the TNAP regions increased from 4.8 billion yuan (around 695 million U.S. dollars) in 1978 to 234.47 billion yuan (about 34 billion U.S. dollars) in 2017.

Apart from this, the local economy and social development have been promoted by the forest fruit industry and forest tourism in TNAP regions. At present, the annual output value of forest fruit and forest tourism has reached 120 billion yuan (around 17 billion U.S. dollars), absorbing 313 million rural laborers and achieving stable poverty alleviation for about 15 million people.

* China increased forest cover from 16.74% of its territory in 1990 to 22.5% in 2015, an increase of 511,807 square kilometres.
* Since the late 1990s, China has planted more than 4 million hectares of forest every year.
* Between 1998 and 2014, investment across the six forestry programmes is estimated to have reached USD 100 billion and involved participation of 20% of China’s rural population.
* Rural households involved in the Loess Plateau restoration project saw their incomes grow from about US$70 per year per person to about US$200 through agricultural productivity enhancement and diversification.
* Surveys have shown over 90% satisfaction rate of farm households in five of the seven counties involved in the Sloping Land Conversion Programme.
* The flow of sediment from the Loess Plateau into the Yellow River has been reduced by more than 100 million tons each year.
* In 2018, China set a target to achieve forest cover over 30% of its land by 2050.

In 2018, China set a target to achieve forest cover over 30% of its land by 2050. China’s rapid transition to reforest vast swathes of depleted and deserted territory represents the largest ecological restoration project the world has ever seen.

Though the project has achieved much success, challenges remain. Since most of TNAP regions are arid and semi-arid areas, lack of systematic consideration of the local water resource can lead to forest decline. The average afforestation rate of TNAP is 47 percent, but about 25 percent of the forests are in an unhealthy state.

Besides, TNAP plays a limited role in reducing severe desertification; the effect of TNAP is far from counteracting the disturbance of human activities.

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Some scientists worry that the planting could worsen water scarcity. Many of the trees are not native to the regions where they have been planted, and they use a lot of water — despite being placed in areas that are experiencing less rainfall due to global warming.

“The idea is nice, but it’s kind of foolish to plant trees in a desert,” says Troy Sternberg, a geographer at the University of Oxford, UK.

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But a closer look reveals that all this new tree cover isn’t actually forest, according to a recent study. It finds most reforestation efforts simply planted one tree species, making a plot of reforested land ecologically akin to a monoculture plantation. These interviews revealed that these households paid attention to government policies and tended to plant species that were promoted. This decision was largely based on how much money they stood to make through government incentives aimed at encouraging the planting of certain types of trees – at times even cutting down actual forest to do so. The researchers say the fault lies in the failure of these policies to differentiate monoculture tree cover from real forest.

Additionaly, the new satellite-based dataset Global Forest Change (GFC) finds decreased forest coverage. In this study, four satellite datasets are used to investigate this discrepancy in forest cover change estimates in China between 2000 and 2013

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