Chinese Biofuels Expansion Threatens Ecological Disaster

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The recent agreement between China's top forestry authority and one of the nation's biggest energy giants to develop biofuels plantations in the southwest reflects rising Chinese attention to non-fossil energy sources. But the excitement may come at great environmental loss to the region's forests and biological diversity, suggesting significant tradeoffs associated with the renewable fuels.

According to the agreement, signed by China's **State Forestry Administration** (SFA) and the oil company **PetroChina** in January, the parties will join efforts in developing two *Jatropha curcas* plantation bases in Yunnan and Sichuan provinces, with biofuel production capacities of 10,000–30,000 tons each and a combined area of more than 40,000 hectares, according to ***China Green Times***. Jatropha, a hardy oilseed bush with seeds containing over 30 percent oil, is regarded as an ideal raw material for biodiesel production.

The Chinese government has since embraced additional biofuels expansion. On February 7, an SFA spokesman told the press that the country was ready to devote more than 13 million hectares of forestlands to biofuels production, **Xinhua News Agency** reported. And several local governments have embarked on or are planning ambitious long-term oilseed plantation projects. According to **blueprints** from the Yunnan Provincial Forestry Department, the province will construct 1.27 million hectares of biofuels plantations and aims to become China's biggest biofuels base by 2015, achieving an annual production capacity of 4 million tons of ethanol and 600,000 tons of biodiesel. Forty counties in the province have begun to develop biofuels plantations.

Ever-rising demand to fuel the country's motor vehicle fleet is driving these developments. A recent **study** by the National Bureau of Statistics reports that private vehicle ownership in China reached 29.25 million by the end of 2006, a 23.7 percent increase over 2005. While it took nearly two decades for Chinese car ownership to exceed 10 million (in 2003), an additional 10 million cars were added in only **three years**. China currently shows a ratio of **60** people per motor vehicle, compared with a world average of **11.5**, indicating huge growth potential for the Chinese market.

Development of the new biofuels plantations will be funded by PetroChina and carried out by forestry authorities at various levels. Both parties have stated that the efforts will be undertaken in the interest of national sustainability, though there is strong suspicion that these actors are placing greater priority on fast and lucrative returns.

An all-out development in ecologically sensitive southwestern China will almost certainly wreak havoc on the environment. The region is home to the country's largest remaining **intact natural forests**, which are vital for maintaining the local and regional climatic balance. These areas have already shrunk rapidly due to rampant logging in recent years, while the new biofuels craze will likely pull the last string of ecological collapse in the region.

The biofuels plantations will allegedly be built on marginal lands, including degraded forestlands and croplands, of which Yunnan province alone has more than 4 million, according to a **local official**. Yet it is not rare in China for local governments to sell off lush hills to logging companies as "**waste forestlands**." With the new incentives created by biofuels, such "black-box" deeds will likely continue and possibly worsen.

Equally daunting is the looming damage to the region's biodiversity from massive monoculture plantations of biofuels crops. Blessed with a favorable geographic location and unique landscapes, natural forests in southwestern China have long been a paradise for flora and fauna, home to more than 6,000 plant species and over 1,000 animal species. Nibbled away by plantations of jatropha and other biofuels plantations, the future of those species appears startling bleak.