Study:Bio-fuels may actually be accelerating global warming
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CHICAGO (AFP) – The use of crop-based biofuels could speed up rather than slow down global warming by fueling the destruction of rainforests, scientists warned Saturday. Once heralded as the answer to oil, biofuels have become increasingly controversial because of their impact on food prices and the amount of energy it takes to produce them. They could also be responsible for pumping far more carbon dioxide into the atmosphere than they could possibly save as a replacement for fossil fuels, according to a study released Saturday.

"If we run our cars on biofuels produced in the tropics, chances will be good that we are effectively burning rainforests in our gas tanks," warned Holly Gibbs, of Stanford's Woods Institute for the Environment. Gibbs studied satellite photos of the tropics from 1980 to 2000 and found that half of new cropland came from intact rainforests and another 30 percent from disturbed forests. "When trees are cut down to make room for new farmland, they are usually burned, sending their stored carbon to the atmosphere as carbon dioxide," Gibbs said. For high-yield crops like sugar cane it would take 40 to 120 years to pay back this carbon debt. For lower yield crops like corn or soybeans it would take 300 to 1,500 years, she told reporters at a meeting of the American Association for the Advancement of Science.

"Biofuels have caused alarm because of how quickly production has been growing: Global ethanol production increased by four times and biodiesel by 10 times between 2000 and 2007," Gibbs said. "Moreover, agricultural subsidies in Indonesia and in the United States are providing added incentives to increase production of these crops." Gibbs estimates that anywhere from a third to two thirds of recent deforestation could be as a result of the increased demand for biofuels, but said an increased demand for food and feed also play a major role.

What is certain is that much of the expansion of cropland in response to growing demand and rising prices is occurring in the tropics where there is an abundance of arable land and climates ideal for growing biofuel crops like sugar cane, soy and oil palm. Simply growing the biofuel crops in the United States or other non-tropical countries will not solve the problem, said Michael Coe of the Woods Hole Research Center. Recent legislation mandating increased use of ethanol has already prompted US farmers to switch from soy to corn production. But since soy demand remains high, farmers in Brazil have responded by cutting down forests to expand soy production. "Emissions from deforestation in Brazil -- even under our best scenarios -- still swamp any decrease in greenhouse gasses in the United States," Coe told reporters.

"We can't find a way that it makes greenhouse gas sense to grow ethanol in the United States." These findings do not mean that biofuels cannot be an important part of energy policy, Gibbs added. Growing biofuel crops on marginal lands can have an overall positive environmental impact and there are enormous tracks of degraded land in the tropics. But since

fighting soil erosion or reversing nutrient leeching with fertilizers costs more than cutting down forests, farmers must be offered economic incentives to do so, Gibbs said.

And policy makers must also decide if the climate would be better served by returning degraded land to its natural forested state so it could act as a carbon sink and provide ecological services such as rainwater recycling, flood mitigation and habitat for endangered species. "There are tradeoffs in all these decisions that need to be made on a case-by-case basis," she said. "We need to keep in mind that more cropland will be needed to meet the global demands for food, feed and fuel, so the best options will likely vary by circumstance."