



BACKGROUND INFORMATION ON BIOFUEL IMPORTS

Palm Oil

Palm oil is being increasingly imported into the United States as a source to make biodiesel, particularly from Southeast Asian countries such as Indonesia and Malaysia. A 100-million gallon a year biodiesel refinery being built along the Pacific coast in Washington State is expected to import significant sums of palm oil.¹ Refineries in Texas are also expected to import palm oil supplies.

Unfortunately, palm oil production is a major source of environmental degradation and destructive land use patterns in Southeast Asia, particularly due to deforestation and wetland conversion tied to the spread of massive palm oil plantations. Nearly 50 percent of currently productive palm oil plantations in Southeast Asian countries is planted on land that was recently converted from forest.² In Malaysia, palm oil plantations have caused 87 percent of total deforestation between 1985 and 2000.³

Widespread deforestation in Malaysia and Indonesia has caused severe damage to the area's rich biodiversity. Rare mammals, such as the Sumatran tiger, the Sumatran orangutan, the Asian elephant and the Sumatran rhinoceros, have become endangered or critically endangered, and it is estimated that orangutans will be extinct by 2016 as a result of palm oil-related deforestation.⁴ The deforestation also contributes substantially to global warming when greenhouse gases are released during the clearing of the rainforest.

Meanwhile, a quarter of all palm oil plantations are established over converted peatlands, a critical kind of wetlands, leading to substantial biodiversity loss. Moreover, in order to convert peatlands into palm plantations, they are drained and burned, creating enormous greenhouse gas emissions that make palm oil ten worse than conventional fossil fuels in terms of global warming pollution.⁵

Brazil: Sugarcane and Soybeans

In recent years, Brazil produced more than 4 billion gallons of ethanol, absorbing more than 50 percent of the sugarcane harvest grown in the country.^{6 7} In 2006, more than 100 million gallons of fuel-grade ethanol was imported into the United States from Brazil.⁸

Sugarcane production in Brazil frequently encroaches on previously occupied lands, particularly agricultural areas that have earlier been converted from wild grasslands and other native ecosystems. Often, as sugarcane plantations occupy these areas, environmental harm spreads when crop and livestock production relocate into wild and native ecosystems – including Brazil's *cerrado*, a tropical savannah and the most biologically rich grasslands in the world.^{9 10} The further expansion of the sugarcane ethanol industry, which already occupies more than 13 million acres, is likely to spread directly into wild and native ecosystems such as the *cerrado*.¹¹

Meanwhile, the sugarcane industry in Brazil has been widely known for its use of child labor and substandard worker health conditions caused by the burning of cane fields. A recent study also documented the decline by half in workers' incomes over the past twenty years.¹²

Although soybean production for biodiesel is not as well established as sugarcane ethanol in Brazil, the potential for soybean biodiesel production to cause harm to Brazil's sensitive ecosystems is great. Between 1995 and 2005, overall soybean production almost doubled to occupy 22.3 million hectares, substantially increasing the pressure on the rainforest frontier.¹³ Soybean production occurs at times in areas cleared of rainforest, but also frequently drives deforestation by displacing cattle producers who then clear rainforest land for grazing.

The continued growth of sugarcane ethanol and soy biodiesel production will significantly increase the intense pressures facing these valuable ecosystems and areas rich in biodiversity. As with palm oil production, the impacts may also increase global warming pollution when grasslands and forests are cleared and greenhouse gases are released as a result.

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¹ Seattle Times, "Can Biodiesel Compete on Price?" February 14, 2007.

² Eric Wakker. "Greasy palms: The social and ecological impacts of large-scale oil palm plantation development in Southeast Asia." Jan. 2005. United Kingdom: Friends of the Earth.

³ Helen Buckland. "The oil for ape scandal: How palm oil is threatening the orangutan." Sep. 2005. United Kingdom: Friends of the Earth Trust.

⁴ Buckland.

⁵ Alijosja Hooijer, Marcel Silvius, Henk Wosten and Susan Page. "Peat-CO2, Assessment of CO2 emissions from drained peatlands in SE Asia." 2006. Delft Hydraulics report Q3943, Wetlands International.

⁶ Delcio Rodrigues and Lucia Ortiz. "Case Study Sugar Can Ethanol from Brazil: Sustainability of ethanol from Brazil in the context of demanded biofuels imports by the Netherlands."

⁷ Edward Smeets, Martin Junginger, Ande Faaij, Arnaldo Walter and Paulo Dolzan. "Sustainability of Brazilian bio-ethanol." Aug. 2006. Utrecht, the Netherlands: Copernicus Institute at Utrecht University.

⁸ Ethanol import data based on United States International Trade Commission data, found at <http://dataweb.usitc.gov>.

⁹ Rodrigues and Ortiz.

¹⁰ Conservation International. "Cerrado." 2007. Conservation International.

¹¹ Rodriguez and Ortiz.

¹² Rodriguez and Ortiz.

¹³ Franz J. Kaltner, Gil Floro P. Azevedo, Ivonice A. Campos, and Agenor O. F. Mundim. "Liquid Biofuels for Transportation in Brazil: Potential Implications for Sustainable Agriculture and Energy in the 21st Century." Nov. 2005. German Technical Cooperation.