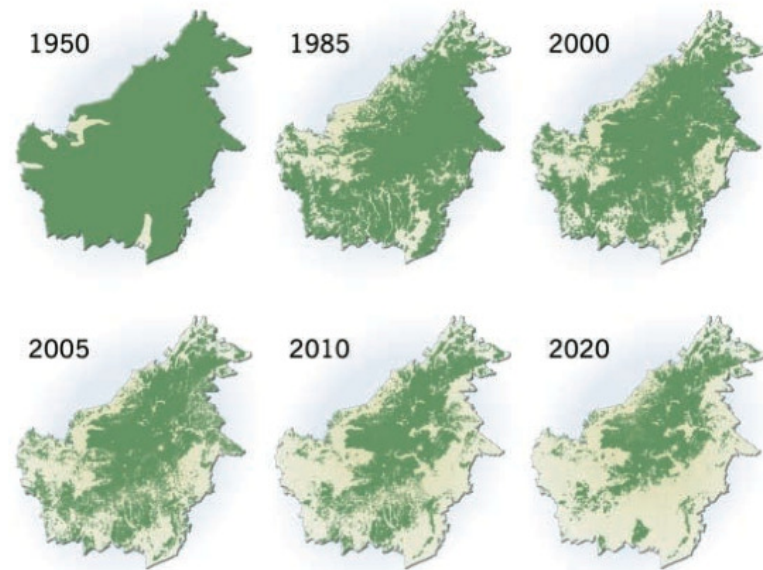
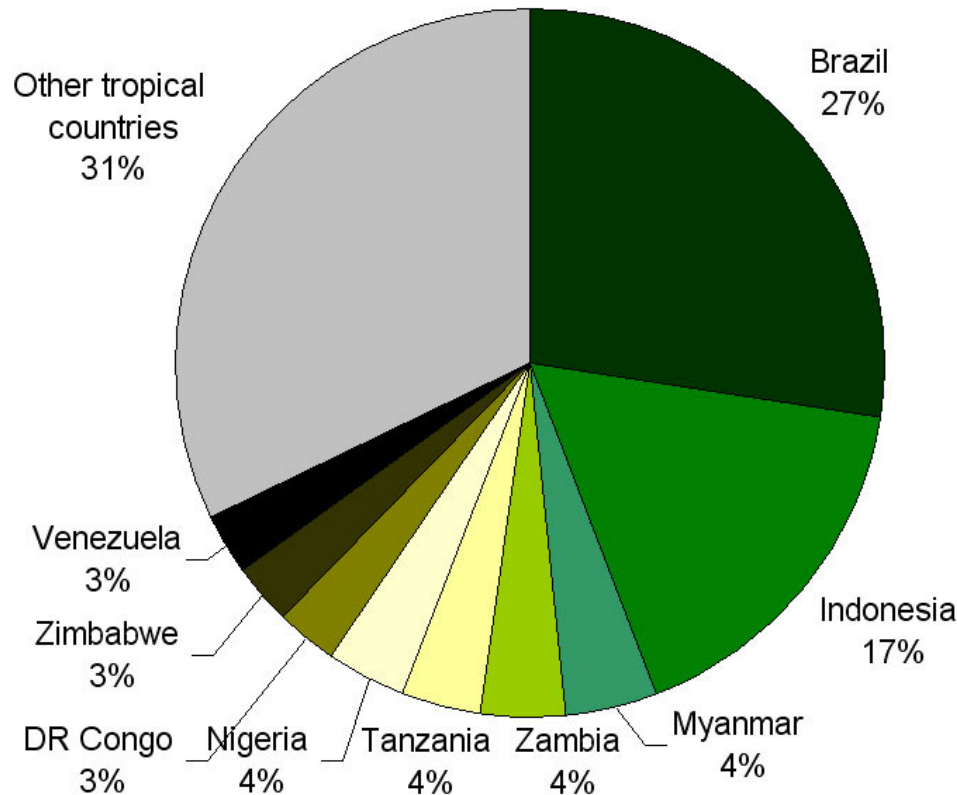


Deforestation: causes and possible solutions

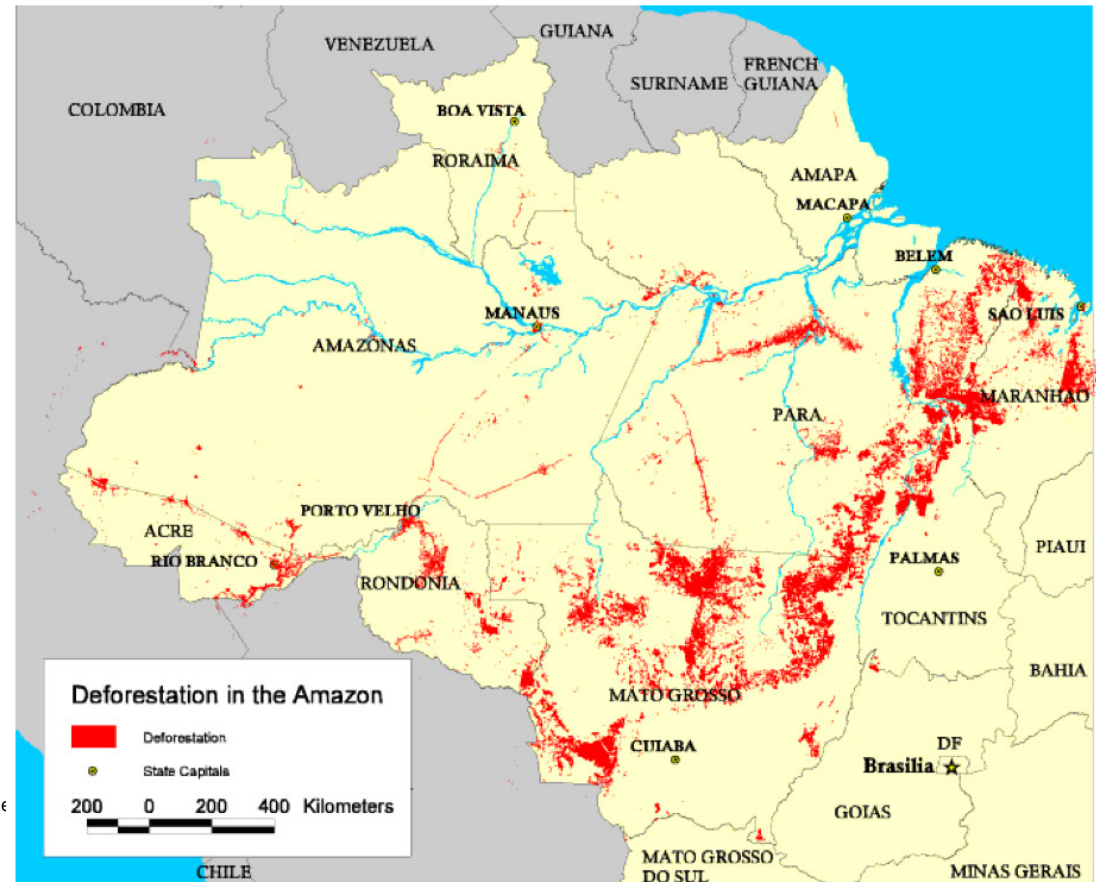
Share of tropical deforestation, 2000-2005

mongabay.com, using FAO data



Deforestation in the Amazon

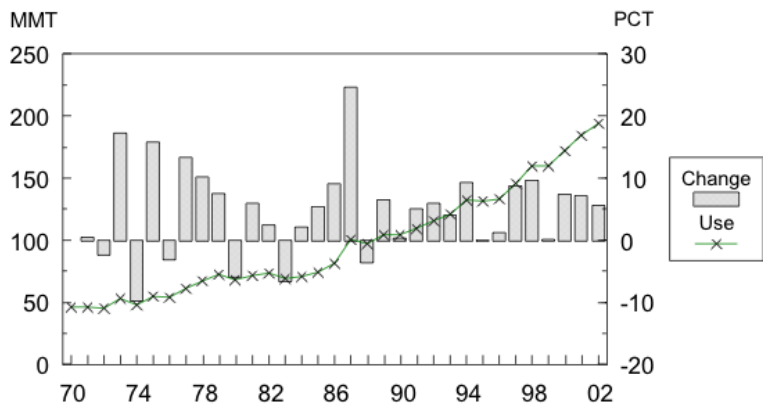
- Deforestation began in earnest in the 1960s, thanks to easier access to once-remote areas.
- About 70% of previously forested land is devoted to cattle pasture. The remainder is used as cropland.



Economic incentives

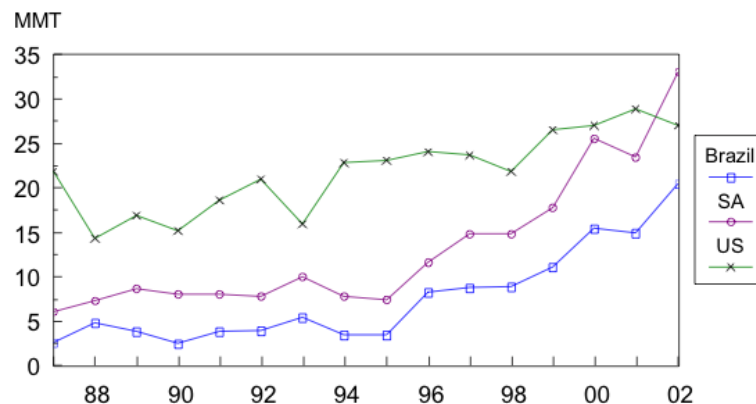
- About two-thirds of deforestation is carried out by large landowners.
- Brazilian tax code provides hefty effective subsidies to expansion of agriculture in the Amazon.
- This, along with industrial-scale agriculture, has allowed Brazil producers to easily compete with US exports.

World Soybean Use



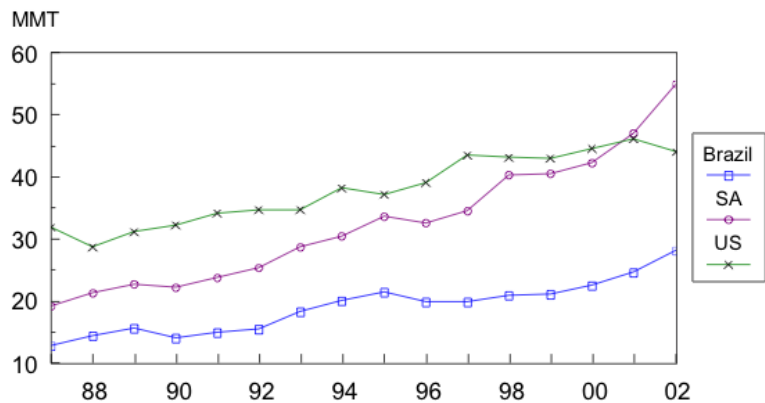
Source: USDA 4/11/03

Soybean Exports



Source: USDA 4/11/03

Soybean Crush



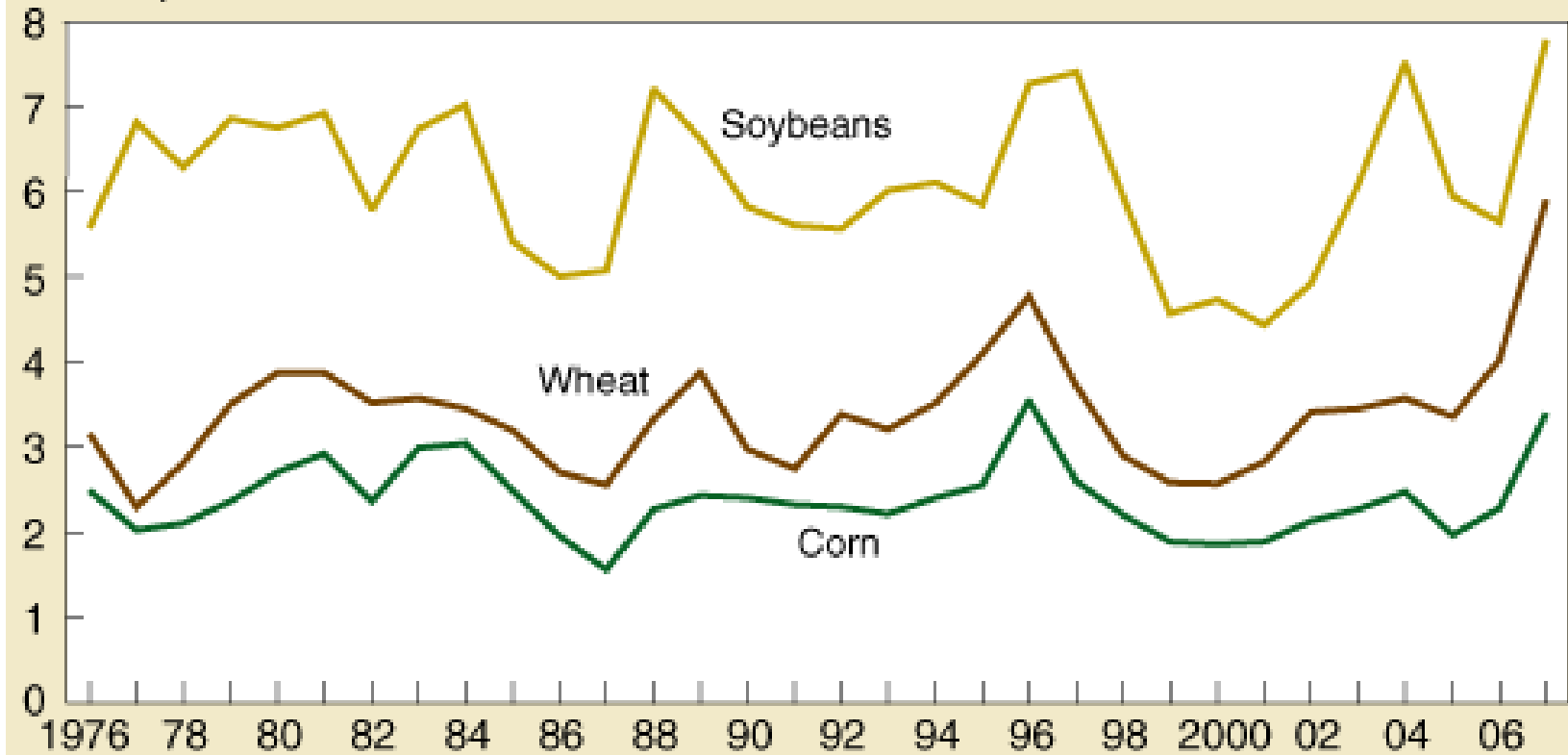
Source: USDA 4/11/03

-Average yield for Amazonian soybean plantations: 2000 kg/ha

-Maximum length of cultivation without fertilizer: 3-6 years.

Corn, wheat, and soybean prices at or near record highs in 2007

Dollars per bushel



Source: USDA, National Agricultural Statistics Service, Agricultural Price Series, 1976-2007.

The US also subsidizes Amazonian soy plantations.

- Brazilian government policy is ambiguous at best; capacity to enforce the law is lacking.
- Agribusiness interests have considerable political clout.
- The most effective way to discourage deforestation may be to pressure major buyers into boycotting deforesters.

Greenpeace: McDonald's harming the Amazon

Posted 4/6/2006 7:46 PM ET

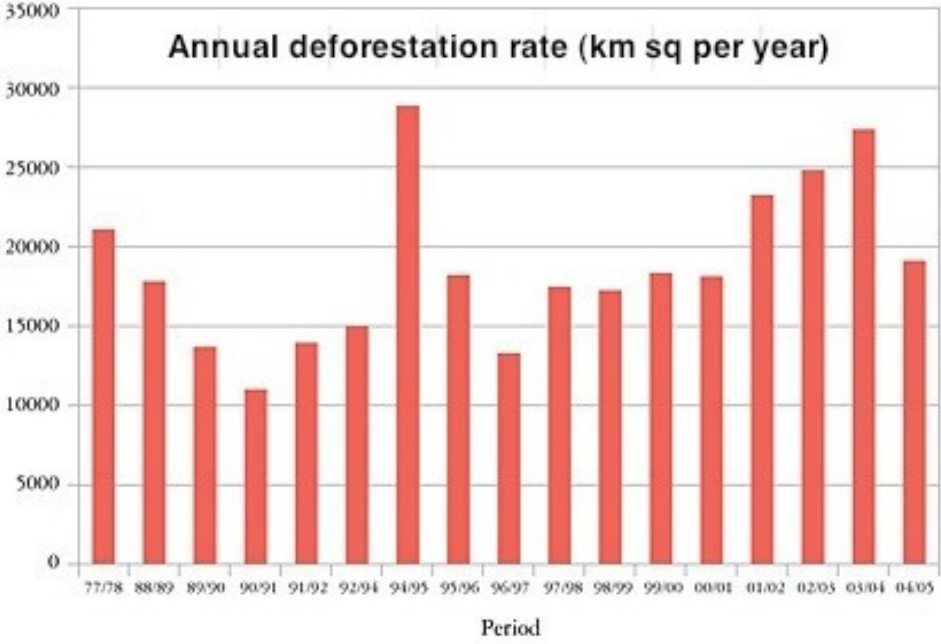
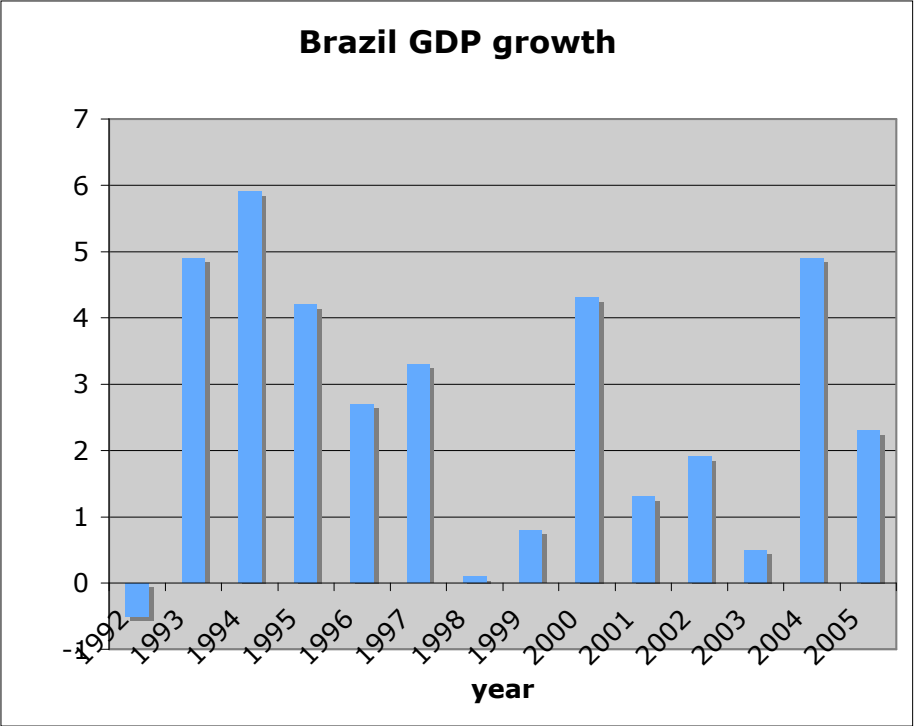
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By Michael Astor, The Associated Press

RIO DE JANEIRO — Greenpeace on Thursday said McDonald's was fueling Amazon rainforest destruction by using soybeans grown in the region as feed for chickens that end up served in the fast-food chain's European restaurants.

In a report entitled, "Eating up the Amazon," the environmental group said it has traced soy beans grown in illegally deforested areas of the rainforest to McDonald's restaurants, as well as other restaurant chains and supermarkets across Europe.

"Fast Food giants like McDonald's are trashing the Amazon for cheap meat. Every time you buy a Chicken McNugget you could be taking a bite out of the Amazon." Greenpeace forests campaign coordinator Gavin



Deforestation in Indonesia

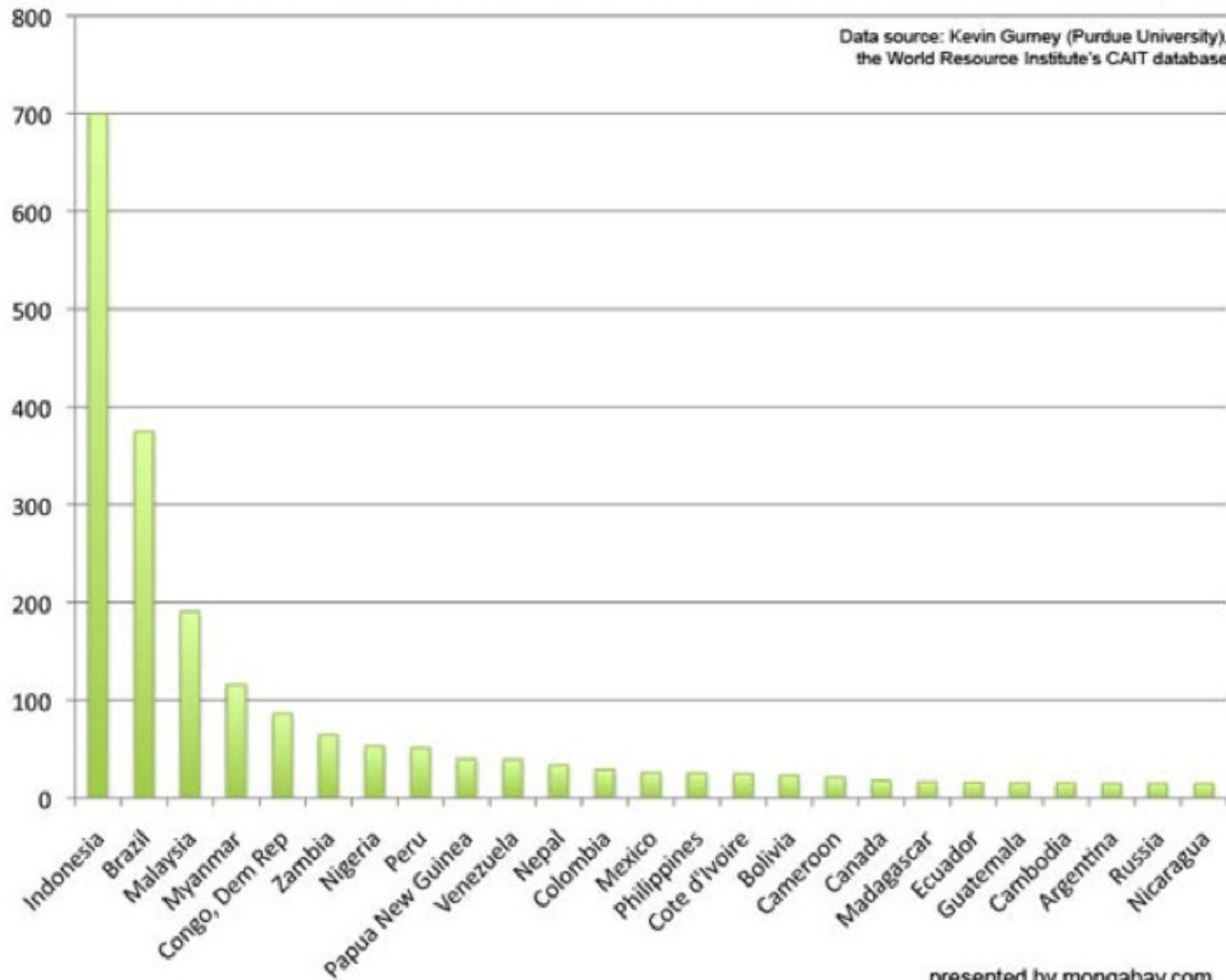
- Unlike in Brazil, deforestation is driven by the demands of the pulp and plywood industries.
- Between 1985 and 1997, 16 million ha were deforested, of which only 6 million ha have been converted to other land uses.
- However, palm oil plantations are increasing in profitability.

Carbon credits?

- Reducing Emissions from Deforestation and Degradation (REDD)

Is deforestation a big problem, or should we be focusing our conservation efforts on peat bogs?

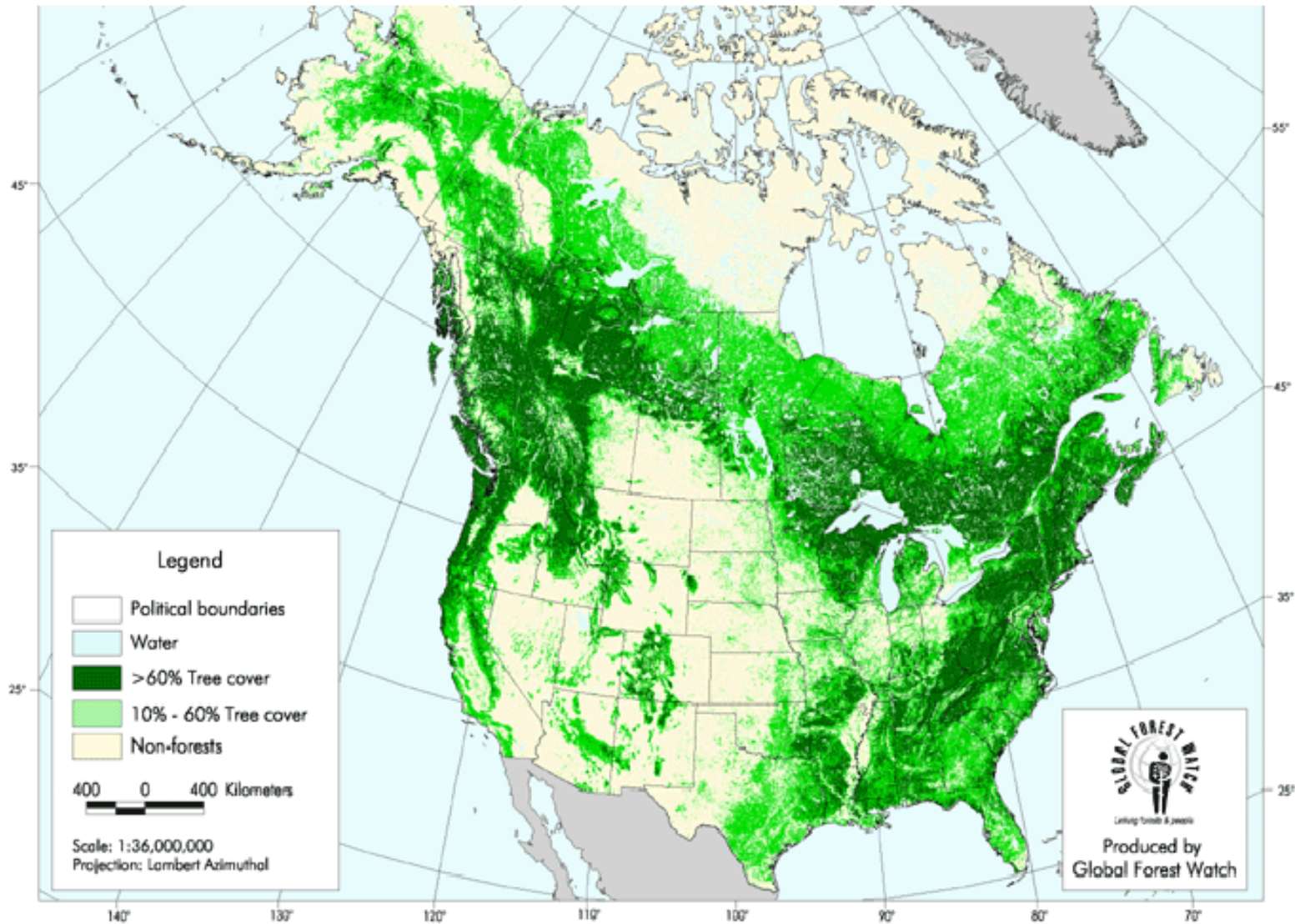
GHG Emissions Resulting from Land Use, Land-Use Change and Forestry (LULUCF), 2000



How long would reforestation efforts have to be in effect before they create a noticeable change in the environment?



Coverage of old-growth forest in the United States, 17th century to present day.



Current forest coverage in North America.

Regrowth of forests in temperate regions sequesters 200 Mt of carbon per year.

Source: forestwatch.org

Does planting plantations of trees sequester a significant amount of carbon? Do you have to cut them down, bury them, and plant more to have a significant impact?

- It depends on what happens in the landfill.
- Decomposing wood in a landfill gives an approximate methane yield of 0.02 grams per gram of dry refuse.
- This means that less than 5% of the carbon contained in the wood is returned to the atmosphere.