DEEP IMPACT

An Estimate of Tropical Rainforest Acres Impacted for a Board Foot of Imported Ipê

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D R A F T

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Ipê Imports

Since the 1960s, ipê (sometimes called bethabara or betha bara), a group of 7 species of trees native to the rainforests and dry forests of Brazil and Bolivia, has become popular as decking for boardwalks, marinas, piers and even homeowner decks in the U.S.

This trend is alarming for a number of reasons. Logging in tropical forests is usually heavily damaging to the forest ecosystem. Logging in the Amazon is directly responsible for 6 to 12% (estimates vary) of the destruction of the forests.[1] However, when one considers that 70% of deforestation from shifting cultivation is precipitated by the creation and presence of logging roads[2], logging can be seen as indirectly responsible for the greatest amount of clearing and burning of Amazon rainforests.

Illegal and High-Grade Logging in Brazil

According to the Brazilian intelligence agency, the SAE (the equivalent of the U.S. CIA), 80% of logging in Brazil is done illegally, outside the bounds of IBAMA, the environment and logging enforcement agency.[3] Due to a lack of funding and field agents, IBAMA is unable to enforce the concessions that it awards.[4] But according to the SAE, only 20% of wood cut is covered by legal IBAMA concessions.

The majority of the wood is logged by roving "gypsy" crews that bulldoze new roads into pristine forests — often those that have been declared indigenous reserves or parks and preserves — seeking high-value species such as mahogany and virola.[5]

Under high-grading schemes, up to fifty percent of the surrounding forest is directly damaged through road building, skid trails (basically, bulldozed trails used for skidders — machines on which logs are brought out) and from peripheral damage from bulldozers.[6] In the rainforest, once a tree is damaged, it may easily die from infection.[7] As stated above, once a logging road is in place, the forest will likely be totally deforested by shifting cultivators.

In recent years, ipê has become one of the species sought by these illegal logging crews.[8]

The Majestic Ipê Tree

Ipê is one of the largest and most beautiful trees in the forest. An emergent (growing taller than the surrounding canopy) flowering tree, it reaches well over a hundred feet in height. Flowers vary in color — white, yellow, red or pink — depending on the species.[9]

Ipê trees occur sporadically in the forest within its range, and on average, just one or two trees are found per acre.[10]

More Demand = More Logging

When turned into lumber, an average ipê tree contains about 2,542 board feet (bd. ft.) in log volume. Only about 40% of that is converted into lumber (120 bd. ft.). When ipê is exported, of this 1,017 bd. ft., only about 25% of it meets the FEQ (First Export Quality) rating (or ~ 250 bd. ft.). Of this figure, 85% (216 bd.ft.) are lengths from 2' to 6' and only 15% (38 bd. ft.) are 7' and longer.[11]

2,542 bd. ft. x 0.4 (mill conversion factor) x 0.25 (F.E.Q. rating)
x 0.15 (over 7' lengths) = 38.13 bd. ft./tree

Taking the conservative figure of 2 trees/acre:

38 bd. ft./tree x 2 trees/acre = **76 bd. ft./acre**

According to the above calculations, on average about one acre of forest must be logged for 76 board feet of FEQ rated ipê over seven feet in length and about one acre for 216 board feet in lengths between two and six feet (the same acre, if an order calls for lengths varying from two to over seven feet).

Therefore, on average, for one board foot of imported ipê over 7 feet in length, one seventy-sixth of an acre, or 573 square feet, must be logged. From what we have seen at typical sawmills in the tropics, much of the remaining wood may be wasted, as the order for the most valuable lumber is what makes the money. The mills may or may not have orders for the remaining, lower quality lumber.

Much of the lumber being requested by boardwalk engineers in the U.S. (and therefore by the suppliers, such as Timber Holdings Ltd., Greenheart Durawoods, William G. Moore, SKC and Thompson Mahogany) is over 7 feet in length.[12]

For one board foot in lengths of two to six feet, one fiftieth of an acre must be logged.

Recently, the city of Long Beach, California, placed an order for 53,500 board feet of ipê lumber, 38,000 linear feet of 1 x 6" and 34,500 linear feet of 2 x 6". 5,000 board feet of this is to be in lengths greater than 7' (8' to 12') and the rest in lengths of 6.5'.[13] This equals 48,000 bd. ft., in lengths 6 feet or shorter, necessitating that about 192 acres of tropical forest be logged; and 5,000 board feet in lengths greater than 7', necessitating that about 65 acres. That is, a total of 257 acres of tropical forest logged for this project alone.

This project is a relatively small one when it comes to the use of ipê for boardwalks, decking, benches and bridges.

Ipê is the wood of choice for New York City Department of Parks and Recreation for construction of boardwalks and park benches throughout New York City; Atlantic City for its boardwalk, as well as hundreds of other agencies and private companies throughout the country.

Conclusion

Just as with mahogany, the increasing demand for a wood that is procured from old growth forests under mostly illegal high-grading schemes spells disaster for the remaining forests of the Amazon.

Rainforest Relief, along with local activists, convinced the towns of Ocean City, NJ and Wildwood, NJ to cancel plans to convert their boardwalks to ipê (from Southern yellow pine). RR, along with Action Resource Center in Los Angeles, convinced the city of Long Beach, CA to convert part of an order for ipê to a supplier that carries independent certification to meet standards of ecologically sound and socially beneficial logging practices. Long Beach as well voted to avoid all uncertified tropical hardwoods in future projects.

Notes

1. a. Thompson, Don, 1994. "Tropical Timber, Certification and Market Realities", Presentation given at "Timber Certification: Implications for Tropical Forest Management", Feb. 5-6, Yale School of Forestry and Environmental Studies, New Haven, CT;
   b. Roselle, Mike and Tracy Katelman, 1989. The Role of the Tropical Timber Trade in the Destruction of the World's Rainforests, Rainforest Action Network, San Francisco.

2. a. United Nations Food and Agriculture Organization, 1987, The State of the World's Forests, Rome;
   f. Poore, Duncan, *et al*, 1989, No Timber Without Trees, Earthscan, London.
3. *Illegal Logging in Amazonia*, unofficial translation of a report by the Brazilian intelligence service, SAE.
4. Martins, Eduardo, the head of IBAMA, the Brazilian environment and natural resources agency (which oversees logging permits), quoted in:
   a. *Lumber Merchants Need to be Controlled Alerts Ecologist*, in *News from Brazil*, SEJUP (Servico Brasileiro de Justica e Paz), Number 293, November 20, 1997. SEJUP was quoting an article the November 9 issue of the *Folha de Sao Paulo* in which Martins was quoted as estimating "**that 80% of the timber cut in the Amazonian region is taken out illegally**
   b. *Forestry Problems in Brazil*, Reuter, September 22, 1997, Michael Christie. Martins is quoted as saying, "if IBAMA were to fully police the timber trade, its current force of 300 officers would have to be raised to 1,400. Then we would have a good chance of controlling the trade, say at least 80 percent of it."
   c. *Green Dreams: What's Gone Wrong?*, Miami Herald, October 25, 1997, Katherine Ellison and Georgia Tasker. The article states, "We still don't really have an environmental policy," the head of Ibama, Eduardo Martins, told Veja magazine last July. "There are good intentions and little effective action."
5. See, for instance, Friends of the Earth Amazonia Project, 1994, "Illegal: An Independent Investigation on Illegal Practices in Mahogany Logging and Trade in The Brazilian Amazon", São Paulo, Brazil.
6. Myers, Norman, 1988, The Primary Source, 1989, W.W. Norton, NY.
7. Ibid.
8. Gasparetto, Olvidio, May, 1996, pers. comm. Mr. Gasparetto is head of AIMEX, the Association of Wood Exporters of Para (Brazil).
9. Borges, Beto, August, 1996, pers. comm. Mr. Borges is former Brazil Program Coordinator of the Rainforest Action Network.
10. Simeone, Robert, January, 1998, pers. comm. Mr. Simeone is a forester and President of Sylvania Woods, a company which sells woods from independently certified operations.
11. Ibid.
12. Personal Communications with various town, city and civil engineers involved in projects in California, New York City and New Jersey.
13. Zimmerman, J. Wickham, 1998. Mr. Zimmerman is project manager of Valley Crest, the company contracted for the Queensway Bay inner harbor project in Long Beach, CA.

Rainforest Relief is a non-profit organization that works to end the loss of the world's tropical and temperate rainforests by reducing the demand for products and materials of rainforest conversion. Rainforest Relief works through education, advocacy, research and non-violent direct action.