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Industrial Logging Should Be Discouraged: A Response to Sist and Colleagues

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The Impacts of Selective Logging: Questionable Conclusions

In their article in *BioScience*, Zimmerman and Kormos (2012) analyzed the impacts of industrial selective logging on tropical forests and concluded that it causes degradation—but that many small-scale community and private-landowner forest management systems lead to the protection of reasonably intact tropical forest ecosystems. Both conclusions can be questioned on the basis of recent publications. In particular, a new study published in *Conservation Letters* that reviewed more than 100 scientific papers concluded that 76% of the standing carbon and 85%–100% of the biodiversity was maintained in once-logged forests (Putz et al. 2012). The authors argued that logged forests should not be considered as degraded lands and therefore eligible for conversion into plantations or pasture but, rather, as lands with high conservation value. Moreover, improvement of forest management practices could further increase the conservation value of logged forests while maintaining their economic value (Sist et al. 2008).

Although small-scale forest management operations are generally considered less damaging than industrial logging, these systems are very diverse, and generalizations are dangerous. In many tropical regions, and particularly in the Brazilian Amazon, so-called "small-scale" forestry implemented by rural populations is in constant evolution; in many cases, rural populations implement mechanized industrial logging through partnerships with logging companies (Sist et al. 2011, Humphries et al. 2012). There is no reason why these forest management practices should better preserve the forest ecosystem than does the industrial selective logging that is ongoing in large concessions, especially where implementation of management plans represents a noteworthy step toward sustainability. There is therefore an alternative approach in which conservationists, governments, and local communities can work with logging companies to implement sustainable forest management practices that protect biodiversity and provide local communities with real economic benefits. Given that selectively logged forests retain substantial biodiversity, carbon, and timber stocks, we believe that improvements in forest management practices must be encouraged and are now likely if synergies are enhanced among initiatives to retain forest carbon stocks (e.g., REDD+ [Reducing Emissions from Deforestation and Forest Degradation]), assure the legality of forest products, certify responsible management, and devolve control over forests to empowered local communities.

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Industrial Logging Should Be Discouraged: A Response to Sist and Colleagues

The scientific studies we review in our paper (Zimmerman and Kormos 2012) conclude unanimously that logging in tropical forests under presently mandated protocols leads to depletion of high-value timber stocks, thereby setting logged forests on a globally well documented course to clearing as land value shifts from timber to agriculture. We agree with Sist and colleagues (2011) that near-sustainable logging of natural forests is technically feasible, albeit only with substantial financial subsidy. We also agree that logged forest supports more biodiversity than cattle pasture or oil palm. We diverge, however, in our opinion on what should be done with this information to achieve the objective of conserving the world's highly threatened tropical forests.

Putz and colleagues (2012) maintain that if best practices were implemented

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using REDD+ (Reducing Emissions from Deforestation and Forest Degradation) subsidy and connected to certification programs, industrial logging could help conserve tropical forests. We concur that this might be the case in a perfect world where pressure to convert forests to high-value industrial agriculture is not as high and where laws are enforced and corruption is not a factor. However, none of the national owners of the world's remaining large blocks of tropical forest have shown significant capacity to enforce laws regulating the use of their forests. For example, in one of the world's most extensive logging frontiers and one that has received a huge amount of international support for regulation and in a country with high technical capacity (the Brazilian Amazon), illegal logging remains rampant. Adding REDD+ subsidy to the logging industry in regions of weak governance will hasten the high grading and destruction of these forests. We contend that the sole solution is to use REDD+ subsidy for replicating successful models of conservation including community-level forest management for timber and nontimber products and for protected areas.

Community management is not a panacea, but the only examples of successfully managed tropical production forest are found with local communities, and the correlates of sustainable management of common pool resources by communities are known. In contrast, we do not know of any tract of tropical forest surviving long term under industrial logging.

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