

## FORESTS

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**Keywords:** Forests, sustainability, ecology, social, politics, international, deforestation, timber, certification, sovereignty.

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### Summary

The effects of deforestation, like many environmental issues, inherently defy political boundaries. Ecological, social, and economic dimensions of deforestation have therefore become matters of urgent international interest in recent years, as reports of increasing rates of forest loss continue to appear. Despite efforts to curb deforestation that now date back several decades, many experts agree that little substantive progress has been made.

International environmental agreements proliferate, but tend to reflect fundamentally symbolic stances rather than realistic standards that might translate into domestic action. North-South tensions are invariably implicated in the debate over forest use, as less developed countries (LDCs) tend to export their wood to more developed countries (MDC). Tropical timber, in particular, earns the spotlight, as sites of unrivalled biodiversity in Asia and Latin America continue to be ravaged by deforestation. As such, stakeholders in the forest issue effectively represent all levels of international

politics: transnational timber corporations, international environmental groups, state governments, local NGOs, and community members.

Despite ongoing barriers to effective cooperation, several international agreements in the forest sector merit particular attention. The Tropical Forestry Action Program, while no longer in existence in its original form, began the landmark process of national forest planning. The International Tropical Timber Organization, an outgrowth of the International Tropical Timber Agreement, remains a force in global forestry. The organization generates and disseminates data to timber exporting countries, and continues to fund national sustainability programs on a project-by-project basis. Other important agreements include the UNCED process, the Kyoto Protocols, and several regional efforts. An analysis of each of these agreements reveals current strengths in international forest management as well as critical gaps in effective reduction of global deforestation levels.

## **1. Introduction**

Deforestation is an issue that increasingly enters the international dialogue, as it spans ecological, social, economic, and political dimensions. Despite ongoing efforts to curb forest loss, rates of deforestation continue to remain steady or increase. Of particular interest are regions central to production for the thriving international timber trade, most notably Asia and Latin America. While many argue that suppliers of tropical timber represent only one side of the commodity chain and insist that importers such as Western Europe and the United States accept equal responsibility for the process, international efforts have historically targeted exporting regions.

The notion of sustainable timber harvesting is central to the dilemma of reducing global deforestation. That is, few would argue that deforestation can be eliminated entirely given the international appetite for wood; instead, proponents of sustainable forestry argue that technology and scientific understanding enable forest managers to craft their extraction procedures so as to minimize long-term damage to the ecosystem. At stake in this proposal, however, are exceedingly powerful interests, both political and economic. Sustainable timber harvesting tends to incur costs on the front end of establishment, as organizations study, train, and implement new techniques for extracting wood. While supporters of the idea insist that such costs will be offset by long-term gains, both economic and ecological, corporations, often tied to political interests, find this argument difficult to swallow.

Throughout the multitude of international negotiations in forest management, North-South tensions have been a consistent theme. The producer-consumer relationship, mentioned above, necessarily implicates asymmetrical economic positions of the actors involved. Likewise, a history of international environmental norms, which have tended to be led by MDCs and resisted by economically-strapped LDCs has fostered a concern that economically secure countries will impose their environmental agenda on their more poverty-stricken neighbors. Domestic compliance with international environmental agreements has been a sticking point for countless treaties and agreements in the spectrum of issue areas, and forest policy is no exception. Many LDCs find forests to be one of their most valuable resources, and using this asset to

enter international markets has proven economically fruitful. However, the trade-offs have been many, and include social dislocation of traditional groups with ancestral claims to forest use, irreversible ecological damage, biodiversity loss, and dominance of international timber organizations at the direct expense of smaller landowners.

International forestry agreements that address these concerns, among others, are several, but the negotiations tend to be incremental and contentious. The most critical agreements in recent years include the Tropical Forestry Action Programme, The International Tropical Timber Organization, and the UNCED process, which span several meetings and continue to evolve. Each of these agreements contributed significant advances to sustainable timber management on the international scale, but remain stalled by inconsistent domestic compliance, lack of domestic capacity, and ongoing international disagreement. Standards for sustainable forest management have been offered by several international scientific organizations, but none have been adopted as mandatory guidelines for either the public or private sector. Indeed, there is no lack of scientific understanding in the forest sector; what continues to block decisive action is not ecological ignorance but economic and political power structures.

The remainder of this article will begin by tracing the various impacts of deforestation at the local, state, and international levels. Then, each international agreement in the forestry sector will be described, and the sources of disagreement analyzed. Finally, a thorough summary of the many sources of disagreement in forging effective international forest agreements will be presented. In the final sub-section, the likely road into the 21<sup>st</sup> Century will be probed, and predictions of future developments offered.

## **2. Deforestation**

Deforestation formally means simply the clearing of a forest for other land uses; however, in this context, deforestation also suggests coinciding land degradation and unsustainable forest loss. While definitions and statistics vary a lot depending on the source, there is widespread agreement that rates of deforestation continue to remain stable or decelerate slightly in developing countries. A total of 65.1 million hectares were lost in the years 1990–1995. In particular, Asian and Latin American regions remain the hardest hit globally, as they contain unrivalled quantities of tropical timber and have increasingly integrated themselves into the global market for timber. Critically, rates of forest loss in developed countries have not only slowed, but actually reversed: an increase of 8.8 million hectares of forestland came in the years 1990–1995. Most of this gain was the result of abandoned agricultural land, and served to dramatize the gulf between developed and developing states in terms of forest issues.

Numbers representing deforestation do not indicate the scope of both direct and indirect impacts of such stunning forest loss. Ecological, social, and economic sectors are all impacted at several levels.

### **2.1 Ecological Dimensions of Deforestation**

Fire is one of the most remarkable and striking changes in the causes of forest loss in recent years. Indeed, the years 1997 and 1998 are widely considered to be the two worst

years for wildfires, with Indonesia, Brazil, and the Russian Federation especially hard hit. Additional ecological causes of forest loss include insect pests and diseases, weather disasters, and air pollution.

Deforestation affects not only the immediate ecosystem, but has drastic ecological reverberations regionally, and, indeed, internationally. At the local and regional levels, forest loss leads to soil instability, and increased vulnerability to erosion. The increased runoff that results from insufficient organic cover can cause catastrophic floods and mudslides.

Thus, as deforestation leads to a disruption in total watershed function, soil fertility and resilience is critically compromised. Biodiversity, too, is reduced as forest cover and forage becomes less available for species. Many unusual or endangered species are put in immediate danger by the felling of the trees so critical for their habitat.

At the international level, forest loss has been blamed for global warming. Trees function as carbon sinks, and when vast tracts of forestland are routinely destroyed, carbon cycling cannot proceed as it has through history. The effects of global warming remain disputed, but include impacts on nature conservation at all levels, threatened marine viability, and shifting climactic zones. Biodiversity is also an international concern, as actual or potential medicinal uses of plant and animal species remain untapped when deforestation destroys populations.

## **2.2 Social and Economic Dimensions of Deforestation**

The value of forests is not purely ecological. Native groups often hold personal or spiritual ties to the land and their forests may well have been ancestrally held. As timber companies focus on traditionally held forestlands, indigenous groups are often relocated as part of the market process, thereby losing their connection to valued land. Tourists and other recreation users also value intact forests for their aesthetic values, and bemoan the destroyed landscapes of deforested areas.

These somewhat intangible social values are matched with more practical social and economic concerns, including the need for fuel wood. As forests are felled, families that depend on wood for heat and cooking must travel hours each day in search of fuel. This work, done predominantly by women, has opportunity costs; the cycle of poverty is reinforced when merely surviving continues to be a full time occupation.

In this way, deforestation functions both as a cause and as a result of poverty; farmers continue to clear land in order to carve out a living in the face of few other options, and continued encroachment and frontier expansion contributes to the scarcity of available land. There is little doubt that the number one source of forest loss is the conversion of forestland to agriculture.

Thus, not only are social and economic patterns implicated in this tendency, but solutions which focus solely on trade barriers, for example, will likely fail to reach the most important causal factor in deforestation. At root here are inequities in land tenure, an aspect of national policy that is controversial and complex.

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### **Biographical Sketch**

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