Forests and Conflict

This briefing paper has been commissioned by the Office of Conflict Management and Mitigation in the Bureau for Democracy, Conflict, and Humanitarian Assistance of the United States Agency for International Development (USAID) as part of a briefing series on natural resources and conflict. It emerged from a collaboration between Adelphi Research (Berlin, Germany), the Center for International Forestry Research (CIFOR) (Bogor, Indonesia), and the Woodrow Wilson International Center for Scholars (Washington, DC, USA). The aim of the briefings is twofold: (1) to raise awareness among mission employees on the links between different natural resources and conflict, and (2) to assist USAID in their program development by integrating conflict prevention and natural resource management. The project has been coordinated by Alexander Carius (Adelphi Research), Geoffrey Dabelko (Woodrow Wilson International Center for Scholars), and Doris Capistrano (CIFOR). The paper has been written by Esther Schroeder-Wildberg (Adelphi Research), Doris Capistrano (CIFOR), Olivia Voils (Adelphi Research), and Alexander Carius (Adelphi Research). The URLs provided in this paper were updated on 02/25/2004.

The project coordinators and the authors wish to thank Sharon Morris, Scott Bode, and Jaidev Singh at USAID for their guidance in developing this paper and comments on earlier drafts. Our specials thanks go to USAID field mission representatives and experts in several other bilateral and multilateral aid agencies who contributed through telephone interviews and email input. The project coordinators and the authors wish to express their gratitude to Duncan Brack (The Royal Institute of International Affairs) for reviewing the final draft of the paper and providing valuable comments. They also wish to thank Meaghan Parker (Woodrow Wilson International Center for Scholars) for carefully editing this paper.

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For references: Schroeder-Wildberg, Esther, Doris Capistrano, Olivia Voils, and Alexander Carius 2004: Forests and conflict (Policy briefing for USAID). Berlin, Bogor, Washington DC: Adelphi Research, Center for International Forestry Research, Woodrow Wilson International Center for Scholars.

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1. Introduction

Covering 36 million km² or roughly 30 percent of the globe, the world's forests are among its most important natural resources. According to the World Bank, "forest resources directly contribute to the livelihoods of 90% of the 1.2 billion people living in extreme poverty and indirectly support the natural environment that nourishes agriculture and the food supplies of nearly half the population of the developing world" (World Bank 2002). However, forests are disappearing at an alarming rate: according to the World Resources Institute, 46% of the world's old growth forests have been destroyed. Competition for these resources triggers, exacerbates, or finances numerous crises and conflicts in tropical developing countries (Renner 2002).

Box 1: Use of the term "conflict"
"Conflict" is defined as a situation of incompatible or adverse interests, in which one or more parties pursue, or threaten to pursue, their interests through violent means. Acute conflicts can range from sporadic violent actions to large-scale civil violence and

Forested areas of poor countries are likely to become areas of conflict because they tend to be remote and inaccessible, located on disputed land, home to multiple ethnic groups and minority populations, lacking government presence, and claimed simultaneously by several different groups. In addition, the majority of forest-dwelling and forest-dependent households suffers from poverty, lack public services, have been poorly integrated into national democratic institutions, and often resent that outsiders capture most of the benefits from forest resources (Kaimowitz 2003).

Countries that have experienced violent conflict in their forests "account for about 40 percent of the world's tropical forest and over half of all tropical forest outside Brazil" (CIFOR 2003). Even after violence has ceased, these countries remain at high risk for renewed conflict since many of the factors that gave rise to violence tend to persist. Almost half of countries that have emerged from civil war return to conflict within five years (Collier et al. 2003). Post-conflict conditions are often aggravated by high expectations that are difficult to meet with shattered institutions and decimated human, technical, and organizational capacities.

This briefing paper explores the links between forests and violent conflict, focusing on five aspects: (1) the use of timber to finance violent conflict; (2) forests as battlegrounds for armed groups, (3) the contribution of logging to lower-scale conflicts; (4) the contribution of poor governance to conflict, and (5) impacts of conflicts on forest ecosystems. It builds on the 2003 USAID-commissioned study by ARD, Inc., on "Conflict Timber: Dimensions of the Problem in Asia and Africa" (Thomson and Kanaan 2003). However, this briefing paper reflects additional lessons from South America, which was not covered in ARD, Inc.'s study. By elaborating on possible options for addressing forest and conflict, this paper complements the continuing efforts of the U.S. government to examine the role of forest resources in people's livelihoods, regional stability, and the world's climate. Two of the most notable USAID initiatives dealing with forests and conflict are the 1995 Central African Regional Program for the Environment (CARPE), which paved the way for the 2002 Congo Basin Forest Partnership. Together, these two initiatives sought to save the Congo Basin's forests while fostering sustainable development. More recently, the U.S. Presidential Initiative Against Illegal Logging, announced in July 2003, seeks to address the problem of illegal logging by facilitating good governance, community-based actions, and technology transfer. This paper explicitly draws on practical examples from USAID and other development agencies, and suggests a framework that USAID missions could use to analyze and address issues of forests and conflict in developing countries around the world.

2. How are forests linked to violent conflict?

Forest-related violence is rooted in local histories and social relations, yet it is also connected to larger economic and social processes and power relations. In most cases, the problem is not a discrete conflict but a multi-layered "conflict system" in which different conflicts interact with one another. Conflict can sometimes impel accommodation and positive institutional change, particularly when the relative power of conflicting parties is evenly matched; however, in other cases, conflict can escalate into violence, especially if the parties have a prior history of conflict and mutual mistrust (Buckles 1999; Peluso and Watts 2001; Ostrom et al. 2002).

A. Timber can be used to finance violent conflict

Timber is in demand in global markets: the OECD estimates that trade in forest products is worth over $150 billion per year. The control and exploitation of timber resources can impact the likelihood, duration, intensity, and balance of power in conflicts and are often closely linked to arms trafficking, human rights violations, humanitarian disasters, and environmental destruction (Renner 2002). However, timber is never the sole cause of conflict; it is always part of broader social, political, and economic dynamics. While not necessarily the commodity of choice, timber has been employed to finance conflict because there are many sellers and buyers, making it difficult to track extraction activities. In addition, the timber trade does not require a large amount of capital; compared to oil, timber harvesting produces high returns for a low investment, and timber can be sold without additional processing. The relative attractiveness of timber compared to other forest resources and "conflict commodities," such as valuable minerals or illicit crops, depends on the following characteristics (Thomson and Kanaan 2003):

- **Accessibility**: Forests are more accessible than subterranean minerals, and harvesting and transporting timber (on rivers or crude roads) is relatively simple. Armed groups can easily extort money by blocking production and transportation routes of legal timber.
- **Flexibility**: Timber's capacity to produce a variety of end products makes it highly marketable and therefore an attractive way to finance conflict.
- **Livelihood value**: Forests are a source of subsistence and livelihood for many people, which can contribute to competition and conflict among forest users and stakeholders.
- **Weight**: Timber's bulk, heaviness, and low price relative to its weight make it less attractive as a conflict commodity.
- **Visibility**: Timber is difficult to conceal, requiring effective control of forest territory or the complicity of state regulators, security forces, and others who could impede its exploitation. In many cases, timber traded to finance conflict helps create networks of illegal exploitation and trade that continue after the conflict has ended.

Conflict timber commonly describes timber that has been traded at some point in the chain of custody by groups involved in armed conflict, such as rebel factions, regular soldiers, or civilian administrations, either to perpetuate conflict or take advantage of conflict situations for personal gain (Global Witness 2003a). Since this definition is quite broad, it has to be qualified in certain situations. For instance, conflict timber does not include legally harvested timber traded by legitimate governments that use the revenues to purchase arms for entirely legitimate self-defense against invasion or insurrection.

State-backed organizations, like the military or certain logging companies, are more likely to exploit and trade timber because they possess the required capital, equipment, and market access (Baker et al. 2003; Thomson and Kanaan 2003). For example, former Liberian president Charles Taylor's personal security forces were funded by the timber industry, which was closely linked to the illegal arms trade.

The conflict timber trade is closely linked to the broader problem of illegal logging, often involving many of the same companies, trade networks, and entrepreneurial methods. A large proportion of logging in tropical countries is illegal: for example, about 80% of Brazil's timber is logged illegally. Lost revenues associated with illegal logging total approximately US$10 billion per year worldwide, in addition to US$5 billion per year in uncollected taxes and fees from legal logging (World Bank 2003).

Timber revenues have been used to finance national and regional conflicts in Burma, Cambodia, the Democratic Republic of Congo (DRC), Ivory Coast, and Liberia. As a conflict commodity, timber often heightens or prolongs existing crises, as the duration of a conflict relies in part on the financial viability of armed groups. Combatants can quickly and easily accumulate a significant amount of capital for war from conflict timber (Price 2003). For example, revenues from conflict timber trade in Liberia, Cambodia, and Burma have been estimated to exceed US$100 million per year (Table 1).

Table 1: Estimated revenues from conflict timber

Country	***Beneficiary***	***Period***	***Revenues (Million US$/year)***
Liberia	President C. Taylor	late 1990s	100-187
Cambodia	Khmer Rouge	mid-1990s	120-240
	Government	mid-1990s	100-150
Burma	Government	1990s	112

(Source: Renner 2002)

Conflict timber and its associated nexus of corruption and violence can:

- Enrich elites at the expense of the general public and small timber producers by diverting timber revenues and reducing prices for timber from sustainably managed forests;
- Undermine the rule of law, increase corruption, and weaken civilian control over the military;
- Displace communities, increase the vulnerability of traditional livelihoods and ways of life, and intensify poverty over the long term;
- Reduce post-conflict development opportunities for local communities and national governments by damaging or destroying forests and wildlife (Thomson and Kanaan 2003; Price 2003);
- Provide financial independence for many rebel groups, thus reducing "their dependence on and accountability to the rural communities from which they traditionally have drawn recruits, material support, and other collaboration" (Price 2003);
- Prolong conflict, as in Cambodia, where both the government and the Khmer Rouge financed their military campaigns with timber resources (Renner 2002). The availability of timber also prolonged the civil war in Ivory Coast; and
- Fuel separatist tendencies, especially in forests with large proportions of valuable timber, such as Burma, which holds 60% of the world's teak reserves (Global Witness 2003b).

B. Forests can provide battlegrounds or shelter for armed groups

Forests can serve as battlegrounds and havens for armed groups, and can provide refuge and food for combatants (Kaimowitz 2003). In Sierra Leone, for example, forests enabled the Revolutionary United Front to regroup, recruit (sometimes with force), and indoctrinate child

soldiers. In many tropical countries, governments do not have a significant presence in forests, so guerrilla groups often move in to fill the power vacuum (Kaimowitz 2002). For example, in Colombia, indigenous leaders opposed to land grabs have been murdered by right-wing paramilitaries, while indigenous people have been forced to join the ranks of the leftist Revolutionary Armed Forces of Colombia. Both sides have appropriated the indigenous peoples' traditional land and cleared forest for the cultivation and subsequent sale of cocaine (Kaimowitz 2001; Álvarez 2001).

Conflict can also arise between indigenous people and outsiders, especially if the forest is remote and inaccessible. In the Amazon region of Brazil, cattle ranchers moving into the forests have come into conflict with traditional rubber tappers. Forest-dwelling ethnic groups and indigenous peoples in many countries have sometimes resorted to violence to fend off outsiders encroaching on their territories or threatening their way of life. In many cases, these are also motivated by the desire to gain greater political autonomy, independence, or a greater share of benefits from the exploitation of local forest resources (Buckles 1999; Peluso and Watts 2001). Many individuals turn to violence in response to human rights violations by government troops, which are common in remote locations where troops are less educated, less supervised, and not subject to scrutiny by the media and non-governmental organizations (Kaimowitz 2003).

C. Logging can lead to lower-scale conflicts in forests

Lower-scale violent conflicts related to forest resources are numerous. They can negatively impact local living conditions, increase livelihood insecurity, and potentially lead to greater conflicts if they are allowed to fester. Although conflicts among competing stakeholders to control timber rarely develop into full-scale war, they can affect a large number of people over a wide area, and thus "may prove larger, longer, and, in the end, more serious" than incidents where timber finances violent conflict (Jarvie et al. 2003).

Logging, land and resource ownership

Conflict can spring from unclear or unfair land and resource ownership rights that render local communities' logging activities illegal. In the past, central governments had little interest in forested areas, which were underdeveloped, sparsely populated, and considered infertile and economically unimportant. As a result, forests became "no-state spaces" where minority ethnic groups have been able to maintain their own systems of governance as governments do little to demonstrate their ownership or exercise official authority. Such "legal pluralism" was common in colonial Africa and Asia (Kaimowitz 2002).

As governments recognize the commercial value of forests, they have tended to appropriate this value by issuing logging concessions, typically without consulting indigenous residents, as in Brazil and Indonesia. However, traditional forest users, who rely on forests for their livelihoods and serve as de facto forest managers, generally do not recognize the government's right to exploit the forests, and local communities may confront logging companies, local governments, police, and the military (Kaimowitz 2002). In many cases, weak state institutions, poor governance, and corruption contribute to these conflicts; competing claims, disputed land titles, and seizures of community land without compensation all can lead to violence. In Indonesia, local communities have defended their traditional rights and livelihoods by seizing equipment, blocking barges loaded with timber, and burning down logging camps. These low-scale conflicts often escalate, because private companies can pay security forces to suppress opposition, and associated human rights violations are often tolerated or supported by local government officials, military, and police (Harwell et al. 2003).

In Brazil's Pará State, the rampant use of falsified land titles to exploit public land, known as "grilagem," has become one of the most powerful tactics enabling outsiders' domination in the Amazon. The proliferation of this illicit practice can be attributed to the lack of a central land

registry, complicit land registration offices, and a legal vacuum regarding land tenure. Once illegal landholders (loggers, cattle ranchers, and land speculators) have obtained possession of property, they often use violence to expel traditional communities with legitimate rights to the land. The general lack of governance and law enforcement allows them to intimidate people by using murder and enslavement to continue exploiting the land for financial gain (Greenpeace International 2003).

Ambiguous land titles may force people to abandon traditional resources, which could limit access to food, water, and other forest products, and thus increase poverty. The possibility of claiming contested land also tends to attract strong outsider groups who can force local communities off their land. In some cases, particularly in well-established communities with strong institutions, the challenge posed by these outsiders and the threat of violence spur the creation of federations and new institutions. Examples include community-initiated joint forest protection and village confederations in India, Nepal, and elsewhere in South Asia.

Logging and distribution of benefits from timber exploitation

In most developing countries, a small group of political or business leaders reap the benefits from timber exploitation, while local communities bear most of the associated social and environmental costs. Conflicts can occur when local people do not receive a fair share of the benefits from the exploitation of their forests or compensation for seized land, environmental damages, or health risks. Logging companies might conflict with local communities that conduct illegal logging. Inequitable distribution of benefits often disrupts local communal and social structures, which can contribute to wider political, social, and economic instability and eventually unrest, as in Indonesia and Bolivia (Price 2003).

However, violent conflicts over the distribution of timber revenues or compensation are not inevitable. A considerable number of communities welcome logging operations, if they can secure part of the benefits or receive satisfactory one-time compensation, either as cash, which is increasingly important as indigenous societies aspire to acquire consumer goods, or as in-kind benefits, such as a new school. For example, plantations in East Kalimantan, Indonesia, use benefit-sharing schemes to distribute compensation to local communities. There are also many examples of community forest management and logging enterprise in Latin America (Lima et al. 2003).

Logging and social and environmental impacts

Large-scale commercial logging by outside private companies (whether as part of the timber trade, for mining, or for dam construction) often has considerable adverse social and environmental impacts on local forest users and forest-dwelling communities.

Roads built for logging operations facilitate the entry of outsiders, sometimes leading to conflicts between indigenous groups and new settlers. Outsiders may migrate to forest areas to access its resources or clear land for agriculture. Logging operators may bring in outsiders from different cultural and ethnic backgrounds to work for the company. The government may encourage colonization of frontier forest lands and their conversion to agriculture through subsidized or state-sponsored relocation programs, such as the promotion of cattle ranching and forest land conversion in the Amazon.

In Vietnam, the government resettled ethnic Vietnamese in mountainous areas in an effort to control indigenous groups suspected of seeking independence. The government offered incentives such as land rights, agricultural assistance, and logging concessions for areas inhabited by indigenous groups. The altered demographics and land-use patterns impoverished the forest-dependent groups and led to conflict (Thomson and Kanaan 2003).

In Indonesia, the government's transmigration program sought to reduce the considerable overpopulation of the main islands (Java, Madura, and Bali). Between 1969 and 1993, some eight million people were relocated to other islands (Forest Watch Indonesia/Global Forest Watch 2002). The government allotted land to the newcomers, engendering competition with locals, and conflicts broke out over economic disparities and ethnic and religious differences (especially when the workers stayed behind after their employer stopped logging). Similarly, in the southern Philippines, the state-sponsored logging and agricultural development of forests and tribal lands in the 1960s and 1970s is a major factor in the ongoing conflict in Mindanao (Capistrano 2003).

Conflicts also often occur when governments decide to unilaterally *protect* the forest from logging or other use, and either attempt to relocate forest-dwellers outside the park's boundaries or restrict neighboring communities' traditional user and access rights. International conservation organizations based in developed countries that advocate the exclusion of people from "protected areas" have been key actors in some recent conflicts. The loss of traditional forest access and rights has led to conflict in Zimbabwe, as well as in many other countries in Africa, Asia, and Latin America. The first transboundary Peace Parks in southern Africa, which were established to improve stability in border areas or to safeguard biodiversity in military zones, often led to conflict with local communities because the process did not involve key stakeholders. Today's Peace Parks are more successful because local communities maintain some control over land and resource use. By creating beneficial interdependencies between states and strengthening the economy through tourism, Peace Parks can potentially contribute to conflict prevention and conflict resolution (Halle 2002; Griffin et al. 1999; Shine 1997).

Protests and conflicts also arise from concerns over the environmental damage and health impacts associated with unsustainable logging and wood processing for pulp, paper, and plywood. On the island of Sumatra in Indonesia, air and water pollution from a pulp and paper mill affected residents' health, killed livestock, reduced agricultural output, and caused chlorine gas explosions. Protests led to the closing of the mill in 1999, but protests began again when the mill reopened in 2003 with the backing of the local government. However, the mill's owners continue to operate, using the military and the police to suppress protest (Happe 2001; Jarvie et al. 2003).

D. Forest ecosystems can be positively and negatively impacted by conflict

Conflicts in and around forests have mixed impacts on forest ecosystems, depending on alternative economic options, availability of roads and market infrastructure, and the nature, condition, and value of forest resources. Conflicts can adversely impact forests under the following conditions:

- Forests can be subjected to unsustainable logging or mining; logging during war is often especially damaging because armed forces tend to extract as much as they can before they lose control over the resource;
- Forests often also serve as a safe haven for refugees fleeing areas of acute fighting; for example, hundreds of thousands of refugees fled into Congolese forests to escape the fighting in Rwanda. Refugees' demands for firewood, bushmeat, and housing materials have led to localized forest degradation (Renner 2002); and
- State or donor-supported forest protection and conservation programs and activities are typically suspended or impeded in times of conflict. Illegal logging and hunting can proceed unchecked, especially where governmental and regulatory authorities are absent or have been rendered ineffective. Even after the end of conflict, weakened political institutions may not have the authority, ability, funding, or the sense of urgency to restart derailed conservation efforts.

In some areas, armed conflict has protected forests from larger-scale exploitation. Armed forces may exploit the forest for their own needs, but at a lower scale than commercial logging, and their presence can discourage illegal logging by outsiders. In Colombia, certain guerrilla groups actively hinder large-scale exploitation to protect the environment, using strictly enforced "gunpoint conservation," which is maintained by landmines and the threat of violence (Álvarez 2003). In the DRC, forests have been spared large-scale logging, because they are remote and lack logistical infrastructure, and timber is only one of several possible conflict commodities, some with much greater value (Baker et al. 2003).

The post-conflict phase may be more damaging to forests. The DRC government has allocated logging concessions for 36% of its forests; in the Republic of Congo, 79% of the forest area will probably be logged in the post-conflict phase (White and Martin 2002). Peace often enables forest exploitation since national reconstruction and development requires increasing amounts of timber, and the need to obtain foreign currency reduces the political will to protect forests (Oglethorpe 2002; Halle et al. 2002). Forests are also sometimes cleared and used to settle and rehabilitate ex-combatants after the fighting stops (Kaimowitz 2003). Therefore, good governance in the forest sector should be established *before* opening it to post-conflict exploitation.

E. Poor governance and economic policy contribute to forest-related conflict

Violent conflict is arguably the ultimate expression of failure of governance. In many developing countries, the failure of governance, combined with inappropriate economic policy and unjust or inequitable laws and regulations, contributes to the onset of forest-related conflicts and hinders their resolution. The most significant aspects include:

- Inconsistent laws and ineffective or selective law enforcement;
- Corruption;
- Weak regulatory framework of the financial sector; and
- High economic dependence on forest resources

The pernicious effects of poor governance are especially pronounced in highly forest-dependent economies and during periods of economic decline and dwindling resources. Shrinking state budgets or economic crises often lead to external borrowing, structural adjustments, and economic policies that tend to promote faster rates of forest exploitation, increased competition and conflict over forests, and worsening conditions for marginalized forest-dependent communities and indigenous groups (Bush and Opp 1999; Capistrano 2003).

Strong civil society institutions can mitigate these trends and blunt their tendency to lead to conflict. In some cases, however, conflict is forestalled by the lack of strong civil society institutions and organized groups, since the stronger party, such as the government and its security forces, has no competition. In Angola, for instance, weak civil society organizations are unable to counteract the government's policy or impact ongoing political, economic, and social processes. Most organizations lack institutional and structural capacities and depend primarily on foreign donors for funding (Paffenholz and Dittli 2002). Although this avoids immediate conflict, without contributions from civil society, poorly formulated reforms can lead to future violent conflict.

Inconsistent laws and ineffective or selective law enforcement

Remote forested areas are often in a state of lawlessness; weak governments, such as those in Sierra Leone, the DRC, and Indonesia, are unable to defend their territorial integrity and to enforce the law. The farther a forest is from the center of government, the more difficult it is for the government to control it. While lack of law enforcement does not necessarily contribute to conflict by itself, inconsistent application of the law, as well as legal discrimination, can lead to grievances. Grievances often emerge when local agents or allies of distant, powerful patrons

control and appropriate most of the benefits from forest exploitation for themselves and their benefactors. Contradictions and inconsistencies between different legal and regulatory systems have caused conflicts, especially when they are perceived to be illegitimate or at odds with customary laws and practice. Unclear divisions of responsibility and overlapping authority among government organizations, causing different government agencies to claim the right to issue logging concessions, also increase the likelihood of conflict (Thomson and Kanaan 2003; Upreti 2002).

The military and the police are often implicated in forest-related conflicts. For example, in Cambodia, Liberia, and Indonesia, the militias hired by private logging companies were recruited from the state military (Global Witness 2002). In Liberia, timber companies used private militias to gain control over local populations, discourage protests, and encroach on communal lands. Timber militias, along with the military and the police, intimidate local communities, destroy and steal goods, and seize farms and forest land for companies (Price 2003; Jarvie et al. 2003).

Corruption

Corruption thrives when states are weak; it weakens the state by eroding citizens' confidence and reinforcing the perception of failure. Corruption hampers the establishment of binding rules and regulations governing access to and harvesting of forest resources. Widespread corruption encourages open access and enables wealthier and better-connected individuals and groups to act outside the law without fear of prosecution. This generally benefits companies, civilian government officials, law enforcement personnel, and legislators (Indonesian Ministry of Forestry 2000; Thomson and Kanaan 2003). As in many other countries, in Indonesia a coalition of politicians, security forces, and judges implicitly or actively supports the illegal operations of the companies that pay the highest bribes. The interests of local communities, which lack the financial resources to pay bribes, are not considered in the decision-making process. Companies, backed by the police and the military, and implicitly supported by government officials and judges, largely control local politics, resulting in poor or selective law enforcement. Thus, large-scale and endemic corruption also contributes to local communities' lack of trust in officials (Upreti 2002).

Weak regulatory framework of the financial sector

Controls on private financial transactions are generally weak in many poor, forest-dependent, developing countries. Loans can be readily obtained from financial institutions with minimal, if any, due diligence procedures. Profits are easy to conceal and move, both within and outside the country, which encourages unscrupulous operators to seek logging concessions and access to timber resources (Thomson and Kanaan 2003). In Indonesia, for example, the large timber conglomerates have their own unregulated "private" banks, which are used to move money out of the country. In the DRC, officers of the invading Rwandan and Ugandan armies used the unregulated banking system to fill their accounts with cash from the exploitation of Congolese forests. In Liberia, Charles Taylor's personal profits from timber exploitation cannot be traced through the banking system.

High economic dependence on forest resources

For many poor countries, forest resources are a source of significant export earnings. For example, in Burma, Cambodia, and Cameroon, trade in forest products contributed around 15% to total exports in 1997. A high level of dependence on natural resource commodities such as timber increases a country's vulnerability to volatile fluctuations in commodity export prices. A high level of dependence on a few, undiversified exports also tend to increase a country's vulnerability to external economic shocks. Countries often do not allocate adequate capital and labor to other sectors, and neglect critical social areas such as education and health. Such underinvestment results in slow innovation and impedes development of human skills (World Bank 2001). The policy response to external shocks and to these vulnerabilities can potentially create conditions for increased conflict.

In Indonesia, timber and wood products contribute about 10-20% to the country's GDP (World Bank 2001). Since the government viewed the timber trade as a way to achieve economic growth, it prohibited the export of logs and rough-sawn timber in the 1980s to encourage the establishment of pulp, paper, and plywood production. Driven by China's and Japan's demand for wood products, Indonesia's domestic processing capacity increased by 700%. This rapid growth in wood processing capacity outstripped the availability of wood supplies from plantations, leading to an increase in illegal logging of natural forests, which is now estimated to account for 73% of all Indonesian logging activity (FWI/GFW 2002).

3. Lessons Learned

In general, conflicts over natural resources, including timber, are difficult to resolve and often resurface in other forms. However, conflicts can be mitigated with approaches and interventions that strengthen institutions and develop capacity to manage conflict (Capistrano 2003). The following interventions can help sever the link between timber and violent conflict:

- Improving participation and partnerships;
- Promoting sustainable forest management (SFM);
- Reducing poverty and improving livelihoods;
- Strengthening indigenous land rights;
- Strengthening governance;
- Improving the regulatory framework of the financial sector; and
- Strengthening public procurement and corporate social responsibility.

Illegal logging is one of the most important sources of conflict in tropical countries. Although there are currently no international rules or agreements that address illegal logging and timber

conflicts in an integrated manner, individual approaches can address different aspects of the problem and collectively contribute to tackling illegal logging and its associated conflicts.

Improving participation and partnerships

Active participation by local communities and loggers is essential to manage competing claims for forest resources. Participatory decision-making involving competing claimants and relevant stakeholders reduces conflict by:

- Facilitating discussion of local issues with key stakeholders, helping diffuse tensions and mitigating conflict;
- Negotiating and developing forums, institutional mechanisms, and norms for decision-making, as well as monitoring and assessing outcomes. These institutional mechanisms can be employed to avert, manage, or resolve conflicts; and
- Promoting solutions that include sustainable forest management and equitable benefit sharing.

In order to avoid conflict, all groups with legitimate interests in the contested forest resource must be included. A successful mediation process requires consulting parties equally, allocating timber revenues equitably, and balancing the interests of locals with those of migrants from other areas. Building the capacity (negotiation skills, financial resources, etc.) of the weakest stakeholders can help reduce power imbalances, and thus encourage more equal participation. In most cases, local communities tend to be the weakest stakeholders (see the Food and Agriculture Organization's project in Ghana and the Multi-Stakeholder Forestry Program in Indonesia). While power relations between people from vastly different class backgrounds (e.g., peasants, bureaucrats) will never be entirely equal, recognizing these differences enables facilitators to try to address them (Bush and Opp 1999; IDRC 2003).

Consensus-based decision-making can reduce the potential for conflict when the stakeholders seek win-win solutions, secure economic benefits for local people, share responsibility for resulting actions, and collectively gather necessary data. In this context, to resolve conflict fairly, the people involved must be incorruptible (Upreti 2002).

Promoting sustainable forest management

Sustainable management of renewable forest resources can prevent conflict. In general, large-scale clear cutting degrades the social and environmental conditions of local communities and can increase competition for the remaining resources. To slow the process, economic incentives that promote large-scale clear cutting should be reduced, local communities should be encouraged to promote sustainable forest management (SFM), and regulations and incentives should be used to persuade large companies holding forest concessions to practice SFM. In turn, as a component of a sustainable system, SFM provides economic diversity and thus helps secure rural livelihoods. Promoting SFM in the context of community-based natural resource management, such as in the Congo Basin Forest Partnership, can also be a conflict management tool. By involving local communities and institutions in resource management, such approaches can mitigate conflict and reduce the potential for violence. However, under certain circumstances, it can also increase conflict, especially when power relations are uneven.

International forest certification schemes can also reduce the likelihood of conflict. The Forest Stewardship Council (FSC) label—the only globally acknowledged timber certification label—requires certified companies to guarantee their products' legality, as well as to establish clear tenure, limit environmental impacts, and provide social and economic support for local communities. If its incentives were strengthened, the label could benefit businesses, reduce the market for illegal timber, mitigate the impacts of legal logging, and thus contribute to reducing

conflict. However, participation in the scheme is very costly, especially for small- and medium-sized enterprises; so far, the scheme has failed in Indonesia due to its high cost (see WWF/TNC Alliance project) (Colchester et al. 2003; Schroeder-Wildberg and Carius 2003).

Reducing poverty and improving livelihoods

Small-scale subsistence logging often plays an important role in the lives of forest-dwelling communities, and could be sustainably operated as part of a diverse livelihood system. Such sustainable forest use could become part of a broader solution to low-level violent conflicts. Development programs can promote interventions and activities that:

- Increase the range of livelihood alternatives for forest-dwelling communities;
- Increase the share of benefits to local communities from timber and other forest products;
- Ensure a fair price for sustainable timber so that fewer trees provide sufficient income;
- Regulate logging more effectively, so that greed does not lead to over-intensive logging; and
- Provide economic incentives for sustainable timber harvesting and logging operations.

Strengthening indigenous land rights

Clearly defined and widely recognized ownership, use, and access rights to land and forest resources are preconditions for people's peaceful coexistence in a resource-rich area. Addressing the inconsistencies between formal and local customary law is a necessary step in conflict resolution. Conflicts and grievances often arise from the ignorance of indigenous groups' rights, which makes them and their resources vulnerable to predation and exploitation by outsiders. Indigenous peoples in many developing countries do not possess formal rights to their traditional lands, and have been displaced or threatened by outsiders' land claims and excluded from sharing profits and benefits.

Development programs should encourage national governments to recognize and secure indigenous people's traditional rights to land and forest resources. While this could be a long process, stakeholders at the local level could agree to recognize local rights and share benefits from logging. The German Development Service project in Ecuador's Esmeralda Forest, helps resolve conflicts over ambiguous land and forest rights. Strengthening local land rights can combat forest degradation, because traditional forest management by local communities often prevents resource overuse. Institutions that mediate between parties, monitor compliance, and enforce sanctions can help sort out competing land and vegetation rights.

Strengthening governance

To break the link between conflict timber and corruption, governance failures must be simultaneously tackled on multiple fronts:

- Minimize and control corruption to re-establish the rule of law (see the Forest Integrity Network);
- Encourage transparent and fair law enforcement in order to prosecute criminals and resolve ambiguous property rights, without degrading rural livelihoods (see the Multi-stakeholder Forestry Program);
- Strengthen conflict resolution institutions and mechanisms at different levels and scales of conflict;
- Promote institutions or mechanisms that foster adaptive learning among stakeholders to build trust and avoid conflict;
- Provide access to information and develop and implement mutually agreed monitoring and evaluation tools; and

- Ensure that local communities and key stakeholders are aware of and able to exercise their forest-related rights, entitlements, and responsibilities.

USAID's exercise in Pata, Senegal, included a number of these elements. The intergovernmental Forest Law Enforcement and Governance (FLEG) and Forest Law Enforcement, Governance and Trade (FLEGT) processes also offer a comprehensive approach to ensuring timber is legal and improving governance in producer countries.

Improving the regulatory framework of the financial sector

Due to weak institutional regulation, financial flows from conflict timber are particularly likely to evade transparency. Tighter oversight, monitoring, and reporting of forest-related financial and commercial transactions could reduce the profitability of conflict timber.

A recent legal innovation in Indonesia appears particularly promising. In 2003, Indonesia modified its money laundering laws to include illegal logging and other environmental crimes as a predicate offense. Under the new laws, banks in Indonesia are required to report any transactions suspected of being connected to illegal logging and other forest crimes to the Indonesian Financial Supporting and Analysis Center. Since about three-quarters of Indonesian wood is felled illegally, most financial transactions of large logging companies should be considered suspicious (CIFOR 2003b). If enforced, this law will make it more difficult to launder money obtained from illegal logging in Indonesia.

The FLEGT process promotes existing money laundering regulations in certain European Union (EU) countries like the United Kingdom, recognizing that these regulations are an important tool in combating illegal logging and thereby reducing related crimes and ultimately conflict.

In addition, financial flows from consumer countries to producer countries need to be regulated. Most due diligence by public and private financial/investment institutions does not determine whether the money they provide finances illegal activities. However, the Dutch Bank ABN AMRO adopted a "forest policy" aimed at minimizing the environmental and social impacts of their financing activities; they do not finance logging operations in primary forests or companies that conduct illegal logging or buy illegal timber (ABN AMRO 2001).

Strengthening public procurement and corporate social responsibility

Public procurement guidelines can play a leading role in excluding conflict or illegal timber from international markets; examples include the EU FLEGT Action Plan and an increasing number of government procurement policies in the EU. The FLEGT Action Plan also calls on corporations to exclude illegal and unsustainably harvested timber from a company's supply chain; companies following these ideas include the largest American retailers, Ikea, and the British Timber Trade Federation, which represents the majority of major UK importers.

For Further Reading:

- In *The Anatomy of Resource Wars*, Michael Renner locates the relationship between forests and conflict within the broader context of natural resources, making clear how timber is used to finance conflict.
- Andy White and Alejandra Martin review official forest ownership worldwide and discuss the possibilities and potential of community forest ownership in their 2002 report *Who owns the world's forests? Forest tenure and public forests in transition*.
- A. Peter Castro and Erik Nielsen present approaches to managing natural resource conflict in their collection of case studies, *Natural resource conflict management case studies: An analysis of power, participation and protected areas.*

- The CARPE Project's 25 issue briefs cover a broad range of issues related to the challenges and solutions of sustainably managing tropical forests. Available at http://www.worldwildlife.org/bsp/publications/africa/127/congo_toc.html.

Program Options

Improving participation and partnerships

Indonesia's **Multi-stakeholder Forestry Programme (MFP)** is funded by the United Kingdom's Department for International Development (DFID). Part of an overall initiative to tackle illegal logging throughout Asia, the Indonesian MFP supports demand-driven policy research and people-based forest management. Begun in 2000, the five-year program combines capacity building with conflict mediation, mitigation, and resolution. It also seeks to promote consensus-based policy for a national forest program through participatory activities, including multi-stakeholder workshops, seminars, and training programs. Also, MFP is consulting community groups about controlling illegal logging without damaging local livelihoods. By involving local communities in decision-making, MFP seeks to avoid conflicts over access to resources.

Launched in January 2002, the five-year, interdepartmental training program "**Improving support for enhancing livelihoods of the rural poor"** seeks to build the capacity of local stakeholders in Ghana, Gambia, and a third country to enable them to effectively and sustainably manage conflicts over forestry, fisheries, and agricultural resources. The forestry department of the United Nations' Food and Agricultural Organization (FAO) is leading the natural resource conflict management effort for the project. The program, which began field tests in 2003, was designed in partnership with local and national agencies in Ghana, and developed training materials for forestry conflict management in collaboration with the Forest, Trees, and People Programme. In addition, the program seeks to strengthen the capacity of FAO and its international partners to integrate conflict management principles based on sustainable livelihood approaches. The program is funded by DFID. For more information see http://www.fao.org/forestry/foris/webview/forestry2/index.jsp?siteId=1760&langId=1→ activities.

Promoting sustainable forest management (SFM)

The private-public **Congo Basin Forest Partnership (CBFP)** (also known as **the Congo Basin Initiative)** takes a unique approach to preserving livelihoods and forests. It is funded by the EU, six countries in the Congo Basin, NGOs, private sector representatives, and international organizations. Formed in September 2002 as a voluntary agreement, the CBFP is a comprehensive, long-term program to promote economic development, alleviate poverty, improve governance, and conserve forest resources. The partnership supports a network of national parks, protected areas, and well-managed forestry concessions, and assists communities in six Central African countries that depend upon these outstanding forestry and wildlife resources. By improving forest governance through community-based management, combating illegal logging, and enforcing anti-poaching laws, CBFP addresses the sources of conflict over forest use. For more information, see http://www.state.gov/g/oes/rls/fs/2003/23208.htm.

The World Wildlife Federation/The Nature Conservancy Alliance to Promote Certification and Combat Illegal Logging in Indonesia seeks to reduce conflict by directly approaching Indonesian logging and wood processing companies. The Nature Conservancy (TNC) and World Wildlife Federation (WWF) Indonesia coordinate this alliance; members include Global Forest Watch of the World Resources Institute, the Indonesian government, the Tropical Forest Foundation, the Tropical Forest Trust, CIFOR, numerous Indonesian NGOs, and several companies. The alliance is funded by USAID, DFID, and the private sector. The WWF/TNC Alliance combats illegal logging in three arenas:

- International: The Indonesian Producer Forest and Trade Network, launched in October 2003 by the WWF, brings together wood-importing companies in Western countries with sustainable Indonesian producers. The alliance also provides information to international banks and other financial institutions that seek to avoid financing forest destruction.

- National: The WWF/TNC Alliance approaches large Indonesian logging companies to promote FSC certification and indigenous land and resource rights.
- Local: The WWF/TNC Alliance is planning pilot studies to devise a reliable and easy-to-use verification scheme to track timber from logging sites to the wood processing plants, which will provide chain-of-custody certification.

Since the FSC label requires companies to practice SFM, recognize indigenous land rights, and share benefits from logging, the alliance's efforts to promote FSC, if successful, could considerably reduce forest conflicts in Indonesia. However, only one forest has been certified to date.

The Canadian International Development Agency (CIDA) funded a project on the **Sustainable Management of Cameroonian Forests (GDFC)**. Completed in 2001, the GDFC project helped the Cameroonian Ministry of the Environment and Forests implement its new forestry policy, known as the Forestry Act, to use sustainable forest resource management. Specifically, this project helped develop and establish forestry information systems and management tools, including developing management plans, determining timber yields, and defining boundaries of valuable forests with the help of rural forestry committees. Sustainable forest management tools are now used at two production forests and at least two neighboring community forests in the southern province of Cameroon. For more information, see http://www.acdi-cida.gc.ca/cidaweb/webcountry.nsf/275bd13b8c9dd41685256809005576e3/b4077ba897f6d00f85256934005cbd2f?OpenDocument.

Reducing poverty and improving livelihoods

The CIDA-funded **Indigenous Peoples Partnership Programme (IPPP)** seeks to increase the capacity of indigenous peoples to fight poverty and build sustainable livelihoods. Launched in January 2003 as a four-year pilot, the IPPP promotes partnerships between aboriginal entities in Canada and indigenous groups in Latin America and the Caribbean. The IPPP expects to:

- Increase capacity of indigenous peoples in the Americas, and of organizations dealing with them, to fight poverty and build sustainable livelihoods; and
- Establish sustainable development partnerships between indigenous peoples in Canada and Latin America and the Caribbean.

For more information, see http://www.acdi-cida.gc.ca/ippp#2.

The **Communal Areas Management Programme for Indigenous Resources (CAMPFIRE)** in Zimbabwe (1989-2003) has successfully highlighted the importance of wildlife resources to Zimbabwe's national economy. By providing opportunities for villages to generate additional earnings through the sustainable use of forests and wildlife, CAMPFIRE addresses the problem of inadequate rural income. The economic benefits derived from sustainable wildlife management have improved supervision of communally owned forest resources and equal distribution of revenues arising from safari/hunting activities Other benefits to the community include new schools, grinding mills, and one-time cash payments for each household. By fostering local resource management and strengthening the capacity of participating rural communities, CAMPFIRE has improved livelihoods and the underlying socioeconomic conditions that often contribute to resource conflicts. The program was funded by USAID and various local partners. Basic information available at http://www.usaid.gov/zw/html/NaturalResources.html

Comprehensive regional approaches addressing forest protection and livelihoods

The USAID-funded **Central African Regional Program for the Environment (CARPE)** is a long-term, regional approach to forest conservation and conflict mitigation. CARPE's partners include African NGOs, research and education organizations, government agencies, and local specialists and communities. The 20-year CARPE initiative began in 1995 and addresses

deforestation, biodiversity loss, and associated conflicts in the countries of the Congo Basin. By building institutional and human resources, CARPE contributes to the sustainable management of valuable forests. Eventually, CARPE's responsibilities will be transferred to Central African institutions. By improving environmental governance, CARPE helps improve democratic governance, transparency, accountability, social stability, and peace in the region. For more information see http://carpe.umd.edu/.

Strengthening indigenous land rights

The **Peaceful Resolution of Land Conflicts in the Esmeralda Forest project in Ecuador** is a joint effort of the German Development Service (DED) and the Coordinating Unit for Sustainable Development of the Esmeralda Forest (UC), whose members include civil society, private enterprises, and local administrations. The project addresses land conflicts arising between indigenous groups and timber companies in the Esmeralda forest. Since local communities are too weak to negotiate with large landowners, the UC consortium supports forest communities in order to ensure sustainable land use, while the DED supports conflict transformation activities, such as training village community representatives to mediate between communities engaged in land conflicts. For more information, see http://www.ded.de/cgi-bin/ded/lib/all/lob/return_download.cgi/fachheft_zfd_eng.pdf?ticket=g_u_e_s_t&bid=139&no_mime_type=0

Strengthening governance

The **Forest Law Enforcement and Governance (FLEG) processes in East Asia and Africa** were the first partnerships among producer and consumer countries, donors, civil society, and the private sector to tackle illegal logging in these regions. FLEG partners include the World Bank, consumer governments (the United States, United Kingdom, EU), and governments in East Asia and Africa. NGOs and private industry participate through advisory groups. Regional FLEG Ministerial Conferences took place in East Asia (2001) and in Africa (October 2003). The African declaration recommended the following actions:

- Reform the forest sector; establish SFM practices, and build capacity for government services, law enforcement personnel, and civil society;
- Establish a publicly accessible, nationally centralized forest database;
- Promote alternative local livelihood initiatives for poverty alleviation;
- Consider the legitimate interests of all stakeholders when developing forest legislation;
- Enforce law and improve forest-related governance, including accountability, transparency, and law enforcement.

With its focus on law enforcement and governance, and its commitment to addressing illegal logging, illegal trade, and corruption, the FLEG process could help reduce conflicts in the forests of East Asia and Africa. While the development of the FLEG process in Africa is still ongoing, the East Asian process is currently slowing down. For information on the African FLEG Process, see http://www.iisd.ca/sd/sdyao/sdvol60num3e.html. On the East Asia FLEG Process:http://wbln0018.worldbank.org/eap/eap.nsf/2500ec5f1a2d9bad852568a3006f557d/c19065b26241f0b247256ac30010e5ff?OpenDocument.

The **EU Action Plan on Forest Law Enforcement, Governance, and Trade (FLEGT)** is the first comprehensive attempt to ensure that timber imported into the EU will come from legal sources. The proposed Action Plan lays out a broad menu of activities, including:

- Signing voluntary bilateral or regional partnership agreements under which exporting countries agree to establish independently monitored systems to verify that timber is legally produced (the EU requires that timber imports have a license ensuring legality; unlicensed shipments are denied access);
- Providing support for capacity building in producer countries, particularly technical and financial assistance to develop licensing systems for tracking compliance and verifying legality;
- Encouraging EU member states to modify their government procurement policies to require legal timber;
- Promoting corporate responsibility among EU companies, including encouraging them to require that their suppliers in producer countries adhere to voluntary codes of conduct to guarantee legality, and to supplement this with independent audits of the supply chain; and
- Using existing legislation (e.g., money laundering laws) to tackle illegal logging, and examining other options to control imports of illegal timber.

Although the Action Plan focuses only on securing the legality of timber, and not its sustainable production, a substantial reduction in illegal logging should contribute to reducing conflict. Furthermore, once the voluntary timber tracking system has been established, the mechanisms could be adapted to encourage sustainably managed forests. For information on the FLEGT process, see http://europa.eu.int/comm/external_relations/flegt/workshop/forest.htm. For the FLEGT Action Plan, see http://europa.eu.int/eur-lex/en/com/cnc/2003/com2003_0251en01.pdf. The Action Plan was approved in October 2003 and is now being implemented.

The non-governmental **Forest Integrity Network (FIN)** explicitly addresses corruption in forest exploitation worldwide. Launched in 2000, FIN combines Transparency International's (TI) experience fighting corruption with civil society's interest in promoting sustainable forestry. This initiative, which is still in the initial stages, seeks to improve understanding of forest-related corruption and to develop common methodologies for analysis, which FIN will promote. To this end, FIN plans to establish and coordinate a coalition of stakeholders willing to fight forest-related corruption, create a web-based document center and database of corruption-fighting initiatives, expand awareness of forest-related corruption, and promote appropriate case studies. FIN is currently reviewing TI's corruption fighting tools to determine their relevance to the forestry sector. At the project's conclusion, FIN plans to produce the first "Forest Corruption Fighters' Toolkit." FIN's anti-corruption measures could help fight forest crimes and thus reduce conflict; however, the "integrity pacts" between governments and private entities will be crucial. The network is funded by Transparency International, the World Bank's Forestry Program, the Program on Forests (PROFOR), FAO's Forestry Program, and Future Forests. For more information see http://www.transparency.org/fin/.

Natural Resources Conflict Management in Pata (southeastern Senegal) is funded by USAID, which studied a 1999 conflict between the indigenous Peul people and migrant farmers over use of forest resources in southeastern Senegal. USAID's assessment involved about 5,000 residents, development partners, and businesses active in the area. The study identified pragmatic options for addressing the conflict. An ensuing meeting among key decision-makers opened the dialogue to local residents and produced a draft action plan. Following USAID's initial exercise, the community developed another action plan in 2001 to promote sustainable management of the 73,000-hectare Pata forest and to reduce conflicts over these resources. The action plan created committees to monitor the forest, which strengthened democratic processes by involving local people, organizations, and government officials. For more information see http://www.usaid.gov/regions/afr/success_stories/senegal.html#story2.

Survey Instrument

This section lists key questions that evaluate the risk of conflict linked to the exploitation of timber. They should help development agencies effectively integrate forest management and conflict prevention tools into their programs and projects. Not all questions will be relevant to each case or region due to natural, historical, and cultural differences.

Six basic questions assess the likelihood of violent conflict arising in forests or over forest resources:

- Are valuable forests located in remote, politically and economically marginalized areas?
- Are these forests divided into logging concessions, and are they already operating?
- Are there secessionist tendencies in these areas, and could timber be used to finance a civil war?
- Are there other conflicts in the region that might be fought in the forests?
- Has the entire context of the potential conflict been examined and a holistic response considered?
- Is the country participating in any international initiatives to reduce conflict or illegal logging (e.g., FLEG, bilateral MOUs, etc.)?

Do underlying governance failures contribute to the potential for violence?

- Is the country's economy diversified or is it highly dependent on timber?
- Do government and security institutions regulate timber harvesting and trading effectively and/or do they participate in it?
- Are there measures to control any significant off-budget income of local and national elites from timber exploitation and is such corruption being addressed?
- To what extent is the security sector involved in the exploitation of forests?
- Are forest laws effectively enforced and does the judicial system prosecute forest criminals?

Do local governance failures contribute to conflict or inhibit resolution?

- Have all groups with legitimate interests in the contested resources been identified and recognized and has the negotiation capacity of weaker groups been strengthened? Has competition been replaced by cooperative forest management, including benefit sharing?
- Have local governance structures been accommodated?
- Have other forms of competition (economic, ethnic, or political) been addressed so that they do not reinforce competition for timber?

What is the status of subsistence logging and how it is influenced from the outside?

- Have livelihoods been diversified or is the economy dependent on logging?
- Is small-scale logging by local communities legal? Do they have legal rights to their land?
- Do third parties that use the forest as a refuge and battleground influence livelihood choices (e.g., does fighting impedes agricultural activities)?

Are the social and environmental impacts of logging and inequitable distribution of benefits fueling grievances or contributing to violence?

- Do the logging companies apply sustainable and selective logging practices and make efforts to sustain local livelihood opportunities?
- If land rights are ambiguous, do compensation or mitigation measures, or even shareholder schemes, provide income to the community? Have they been fairly negotiated? Are employment and/or social schemes planned?

- Do timber processing plants meet environmental standards? Is compliance enforced? Are human rights respected when these plants are secured?

Contacts

For further information on international research institutes relevant to the forest/conflict debate:

Forest Trends (promotes incentives that diversify trade in the forest sector)
1050 Potomac Street NW
Washington, D.C. 20007, USA
Contact: Megumi Hiromitsu, Research Associate
Email: mhiromitsu@forest-trends.org
Phone: +1-202-298 3001
Fax: +1-202-298 3014
www.forest-trends.org

ARD, Inc. (USAID Conflict Timber study)
159 Bank Street, Suite 300
Burlington, VT 05401, USA
Contact: Jamie Thomson, Senior Associate
Email: JThomson@ardinc.com
Phone: +1-802-658 3890
Fax: +1-802-658 4247
www.ardinc.com

World Resources Institute (WRI)
10 G Street NE (Suite 800)
Washington, DC 20002, USA
Email: front@wri.org
Phone: +1-202-729 7600
Fax: +1-202-729 7610
www.wri.org

SwissPeace (conflict analysis, tools for conflict mitigation, and peacebuilding strategies)
Sonnenbergstrasse 17
3000 Bern 7, Switzerland
Contact: Eva Ludi, Project Coordinator
Email: ludi@swisspeace.unibe.ch
Phone: +41-31-330 1212
Fax: +41-31-330 1213
www.swisspeace.org

International Institute for Sustainable Development (IISD)
C-402, International Environment House
13 Chemin des Anémones
1219 Châtelaine, Geneva, Switzerland
Trade Knowledge Network
Contact: Mark Halle, Director and European Representative
Email: mark.halle@iprolink.ch
Phone: +41-22-979 9353
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www.iisd.org

Center for International Forestry Research (CIFOR)
P.O. Box 6596, JKPWB
Jakarta 10065, Indonesia
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Phone: +62-251-622 622
Fax: +62-251-622 100
www.cifor.cgiar.org

Royal Institute of International Affairs (RIIA)
Chatham House, 10 St James's Square,
London SW1Y 4LE, UK
Contact: Duncan Brack, Associate Fellow, Sustainable Development Programme
Email: dbrack@riia.org
Phone: +44-20-8674 0612
Fax: +44-20-7957 5710
www.riia.org/sustainabledevelopment

www.illegal-logging.info is a separate website that acts as an independent source of information on all aspects of the illegal logging issue.

For further information on international initiatives:

Programme for International Cooperation and Conflict Resolution
Fafo Institute for Applied Social Science
www.fafo.no/piccr

Contact: Mark B. Taylor
Deputy Managing Director (Canada)
Email: mark.taylor@fafo-piccr.org
Phone: +1-613-2760 323
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International Model Forest Network (IMFN) Secretariat
International Development Research Centre (IDRC)
PO Box 8500,
Ottawa, ON, K1G 3H9, Canada
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Email: pbesseau@idrc.ca
Phone: +1-613-236 6163
http://web.idrc.ca/ev.php?URL_ID=22891&URL_DO=DO_TOPIC&URL_SECTION=201

CIDA Forestry Advisers Network stimulates thought on international forestry issues.
Canadian International Development Agency
Email: info@rcfa-cfan.org
www.rcfa-cfan.org

Forestry Policy and Institutions Service (FONP)
Food and Agricultural Organization (FAO)
Program: Improving Support for Enhancing Livelihoods of the Rural Poor
Viale delle Terme di Caracalla
00100 Rome, Italy
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Ruby Dagadu (rdagadu@wanep.org)
www.fao.org/forestry/foris/webview/forestry2/index.jsp?siteId=1760&langId=1

For further information on development organizations addressing conflict/forest:

United Kingdom's Department for International Development (DFID)
Masida House, Sankara Interchange
P.O. Box 296, Accra, Ghana
Contact: John Winter
Email: ghana-enquiries@dfid.gov.uk
Phone: +233-21-2532 43
Fax: +233-21-253244
www.dfid.gov.uk

German Development Service (DED)
Deutscher Entwicklungsdienst gGmbH
Tulpenfeld 7,
53113 Bonn, Germany
Contact: Lothar Rast, Head of Unit
Email: lothar.rast@ded.de
Phone: +49-228-2434 210
Fax: +49-228-2434 209
www.ded.de

For further information on monitoring NGOs:

Worldwatch Institute
1776 Massachusetts Ave. NW
Washington, D.C. 20036-1904, USA
Contact: Michael Renner, Senior Researcher/ Project Director, Vital Signs
Email: mrenner@optonline.net
Phone: +1-631-369 6896
Fax: +1-626-608 3189
www.worldwatch.org

Forests and the European Union Resource Network (FERN) promotes the conservation and sustainable use of forests and respect for the rights of forest peoples in the policies and practices of the European Union.
20 Avenue des Celtes
B-1040 Brussels, Belgium
www.fern.org

Contact: Chantal Marijnissen
Trade, illegal logging
Email: chantal@fern.org
Phone: +32-2-742 2436
Fax: +32-2-736 8054

Contact: Bérénice Muraille
Intergovernmental forest policy, development co-operation, EC Forest Platform
Email: berenice@fern.org
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Human Rights Watch (HRW)
350 Fifth Avenue, 34th Floor
New York, NY 10118-3299, USA
Contact: Emily Harwell
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Phone: +1-212-290 4700
Fax: +1-212- 736 1300
www.hrw.org

Global Witness works to expose the link between natural resource exploitation and human rights abuses.
P.O. Box 6042
London, N19 5WP, UK
Contact: Gavin Hayman
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Phone: +44-20-7272 6731
Fax: +44-20-7272 9425
www.globalwitness.org

Global Forest Watch at WRI
10 G Street NE
Washington, DC, 20002, USA
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www.wri.org

Forest Integrity Network (FIN)
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Phone: +49-30-343 820 652
Fax: +49-30-347 03 912
www.transparency.org/fin/

References

ABN AMRO 2001: ABN AMRO Risk Policies: Forestry and tree plantations (approved October 5, 2001). ABN AMRO Bank N.V. Amsterdam, The Netherlands.

Álvarez, María D. 2001: "Could peace be worse than war for Colombia's forests?" in The Environmentalist, Vol. 21, pp. 305-315.

Álvarez, María D. 2003: "Forests in the time of violence: Conservation implications of the Colombian war," in Journal of Sustainable Forestry, 16(3/4), pp. 49-70.

Baker, Murl, Robert Clausen, Ramzy Kanaan, Michel N'Goma, Trifin Roule, and Jamie Thomson 2003: Conflict timber: Dimensions of the problem in Asia and Africa, Volume III: African cases (Final report submitted to USAID). ARD, Inc.

Buckles, Daniel (Ed.) 1999: Cultivating peace: Conflict and collaboration in natural resource management. International Development Research Center (IDRC)/ World Bank.

Bush, Kenneth D. and Robert J. Opp 1999: "Concept peace: Peace and conflict impact assessment," in Buckles, Daniel (Ed.): Cultivating peace: Conflict and collaboration in natural resources management. IDRC / World Bank.

Capistrano, Doris 2003: Keynote address. Presentation at the Expert Workshop on Environmental Conflict and Sustainable Peace on August 25, 2003, Bogor, Indonesia.

Castro, A. Peter and Erik Nielsen 2003: Natural resource conflict management case studies: An analysis of power, participation and protected areas. Rome: Food and Agriculture Organization. Available at http://www.fao.org/DOCREP/005/Y4503E/Y4503E00.HTM

Centre for International Forestry Research (CIFOR) 2003a: Fact sheets: Forest and conflict. Downloaded December 1, 2003, from http://www.cifor.cgiar.org/docs/_ref/aboutcifor/factsheet/forests_conflict.htm

CIFOR 2003b: Media release: Indonesian government's new money laundering laws can help save Indonesia's forests (September 17, 2003).

Colchester, Marcus, Martua Sirait, and Boehdi Wijardjo 2003: The application of FSC principles 2 and 3 in Indonesia: Obstacles and possibilities. WALHI (Indonesian Forum for Environment) and AMAN (Alliance of Indigenous Peoples of Indonesia) Available at http://www.walhi.or.id/

Collier, Paul, Lani Elliott, Havard Hegre, Anke Hoeffler, Marta Reynal-Querol, and Nicholas Sambanis 2003: Breaking the conflict trap: Civil war and development policy. Washington D.C.: World Bank.

Forest Watch Indonesia (FWI) and Global Forest Watch (GFW) 2002: The state of the forest: Indonesia. Bogor/Washington, DC.

Greenpeace International 2003: State of conflict: An investigation into the landgrabbers, loggers and lawless frontiers in Pará State, Amazon. Amsterdam: Greenpeace International.

Griffin et al. 1999: Study on the development of transboundary natural resource management areas in Southern Africa: Highlights and findings. Biodiversity Support Program: World Wildlife Federation, The Nature Conservancy, World Resources Institute.

Global Witness 2002: The logs of war: The timber trade and armed conflict (Fafo Report 379). Oslo: Fafo Institute for Applied Social Science.

Global Witness 2003a: Forests–Introduction and Campaign Aim. Downloaded November 22, 2003, from http://www.globalwitness.org/campaigns/forests/

Global Witness 2003b: A conflict of interests: The uncertain future of Burma's forests (Global Witness briefing). http://www.globalwitness.org/reports/download.php/00108

Halle, Mark 2002: Protected areas as a platform for communication. Presentation at the Naturschutz – (Aus-)Löser von Konflikten Conference on November 26-27, 2002, in Berlin. http://www.bfn.de/09/skript898.pdf.

Halle, Mark et al. 2002: « Conclusion, » in Richard Matthew, Mark Halle, and Jason Switzer: Conserving the peace: Resources, livelihoods, and security, pp. 385-408. IISD/IUCN.

Happe, Barbara 2001: Tabula Rasa auf Sumatra: Die ökologischen und sozialen Auswirkungen des Zellstoff- und Papierbooms in Indonesien. Germany: Urgewald e. V.

Harwell, Emily et al. 2003: Without remedy: Human rights abuse and Indonesia's pulp and paper industry. Washington, DC: Human Rights Watch.

International Development Research Centre (IDRC) 2003: Lessons from IDRC-supported research. Downloaded November 24, 2003, from http://web.idrc.ca/en/ev-28150-201-1-DO_TOPIC.html

Indonesian Ministry of Forestry 2000: Analysis and discussion paper by the Director General for Protection and Conservation of Nature presented at the National Working Meeting of the Ministry of Forestry and Estate Crops, June 26-29, 2000. Quoted in Charles Victor Barber: "Forests, fires and confrontation in Indonesia," in Richard Matthew, Mark Halle, and Jason Switzer 2002: Conserving the peace: Resources, livelihoods and security, pp. 99-169. IISD/IUCN.

Jarvie, James, Ramzy Kanaan, Michael Malley, Trifin Roule, and Jamie Thomson 2003: Conflict timber: Dimensions of the problem in Asia and Africa, Volume II: Asian Cases (Final report submitted to USAID). ARD, Inc.

Kaimowitz, David 2001: "Get serious about averting trouble in the forest," in The International Herald Tribune, November 30, 2001.

Kaimowitz, David 2002: Why are there so many conflicts over forests? Speech delivered at the 30th International Forestry Students Symposium, "Forest Conservation: Role and Implementation towards Sustainable Forest Management" in Indonesia.

Kaimowitz, David 2003: Forests and war, Forests and peace. Bogor, Indonesia: CIFOR.

Lima, Eirivelthon et al. 2003: Forestas familiares. Belem, Brazil : Instituto de Pesquisa Ambiental de Amazonia.

Oglethorpe, Judy et al. 2002: "Overview C: Conservation in times of war," in Richard Matthew, Mark Halle, and Jason Switzer: Conserving the peace: Resources, livelihoods, and security, pp. 361-383. IISD/IUCN. 361-383.

Ostrom, Elinor et al. 2002: The drama of the commons. Washington, DC: National Academy Press.

Paffenholz, Thania and Roland Dittli 2002: Peace and Conflict Impact Assessment (PCIA) of the Swiss Angola Programme (Assessment report). SwissPeace.

Peluso, Nancy and Michael Watts (Eds.) 2001: Violent environments. Ithaca and London: Cornell University Press.

Price, Stephen (forthcoming): Forests and violent conflict in Sub-Saharan Africa (CIFOR occasional paper). CIFOR/Global Witness.

Renner, Michael 2002: The anatomy of resource wars (Worldwatch Paper 162). Washington, DC: Worldwatch Institute

Shine, Clare 1997: “Legal mechanisms to strengthen and safeguard transboundary protected areas,” in Adrian Phillips: Parks for peace: International Conference on Transboundary Protected Areas as a vehicle for international co-operation. Somerset West.

Schroeder-Wildberg, Esther and Alexander Carius (forthcoming): Illegal logging, conflict and the business sector in Indonesia (study on behalf of InWEnt). Berlin.

Thomson, Jamie and Ramzy Kanaan 2003: Conflict timber: Dimensions of the problem in Asia and Africa, Volume I: Synthesis report (Final report submitted to USAID). ARD, Inc.

Upreti, Bishnu 2002: Conflict management in natural resources, Nepal (Case study on conflict and peace in mountain societies). Mountain Forum E-consultation for the Bishkek Global Mountain Summit, UNEP. Available at http://www.mtnforum.org/resources/library/upreb02a.htm

White, Andy and Alejandra Martin 2002: Who owns the world’s forests? Forest tenure and public forests in transition. Washington, DC: Forest Trends.

World Bank 2001: Indonesia: Environment and natural resource management in a time of transition. Washington, DC: World Bank.

World Bank 2002: A revised forest strategy for the World Bank Group. Washington, DC: World Bank.

World Bank 2003: Manuscript by Nalin Kishor, presented at the Brown Bag Meeting, December 12, 2003, in Berlin.