

Final Report Submitted to the
United States Agency for International Development

Conflict Timber: Dimensions of the Problem in Asia and Africa

Volume I

Synthesis Report

Authors

Jamie Thomson, Institutional Specialist
Ramzy Kanaan, Natural Resource Management and Governance Specialist

Under the Biodiversity and Sustainable Forestry (BIOFOR) IQC
Contract No. LAG-I-00-99-00013-00, Task Order 09

Submitted to:
USAID/DCHA/OTI and USAID/ANE/TS

Submitted by:
ARD, Inc.
159 Bank Street, Suite 300
Burlington, Vermont USA 05401
Tel: (802) 658-3890



TABLE OF CONTENTS

ACRONYMS AND ABBREVIATIONS	ii
EXECUTIVE SUMMARY	iii
1.0 BACKGROUND	1
1.1 BACKGROUND	1
1.2 ORIGINS OF THE STUDY	2
1.3 OBJECTIVES OF THE STUDY	2
1.4 TASK ORDER IMPLEMENTATION.....	3
1.5 STRUCTURE OF THE SYNTHESIS REPORT	4
2.0 ANALYTICAL FRAMEWORK	5
2.1 INTRODUCTION.....	5
2.2 COMMODITIES	5
2.3 MARKETS	7
2.4 GOVERNANCE	8
3.0 REGIONAL SUMMARIES.....	10
3.1 ASIA REGIONAL SUMMARY	10
3.2 TRENDS IN ASIA	13
3.3 AFRICA REGIONAL SUMMARY	15
3.4 TRENDS IN AFRICA	19
3.5 COMPARISON: ASIA AND AFRICA	21
4.0 KEY FINDINGS.....	26
5.0 RECOMMENDED PROGRAMMATIC RESPONSES FOR USAID	32

ACRONYMS AND ABBREVIATIONS

ANE	Asia and the Near East Bureau
CT	Conflict Timber
D/G	Democracy and Governance
DCHA	Democracy, Conflict, and Humanitarian Assistance
DRC	Democratic Republic of the Congo
GDP	Gross Domestic Product
GOC	Government of the Congo
GOI	Government of Indonesia
IDP	Internally Displaced Person
m ³	cubic meters
NGO	Nongovernmental Organization
NTFP	Non-Timber Forest Product
OTI	Office of Transition Initiatives
PRC	People's Republic of China
TS	Technical Support
Type I	Conflict financed and sustained through the harvest and sale of forest products
Type II	Conflict emerges as a result of competition over forest resources
UN	United Nations
USAID	United States Agency for International Development
USG	United States Government

EXECUTIVE SUMMARY

Conflict timber—conflict financed or sustained through the harvest and sale of timber (Type 1), or conflict emerging as a result of competition over timber or other forest resources (Type 2)—poses serious problems in many countries in Asia and Africa. While forest resources, particularly timber, are far from the only commodities that spark or finance conflicts, they have certainly played a considerable role in sustaining many conflicts in these regions.

This diagnostic analysis of *Conflict Timber: Dimensions of the Problem in Asia and Africa*, jointly commissioned by USAID/DCHA/OTI and USAID/ANE/TS, was designed in response to the growing recognition of the connection between forests, logging and conflict. The primary objective of the analysis was to provide a comprehensive examination of the economic, ecological, political, social and security dimensions of conflict timber in both Asia and Africa. In addition, the Team was also asked to conduct the analysis in a way that would broaden and deepen the understanding of conflict timber within USAID.

The Conflict Timber Task Order was implemented in two phases. Phase I focused on gathering, reviewing and analyzing a broad range of information on conflict timber incidents from across Asia and Africa. To begin characterizing the magnitude and dimensions of the problem at the global and regional scales, country-level conflict timber profiles were developed for 15 countries from Asia and Africa. To develop these profiles, the Team processed information on conflict timber from a range of sources (e.g., official and nongovernmental organization [NGO] reports, newspaper accounts, interviews with key informants and stakeholders within the US government/United Nations [UN] agencies/international finance institutions/NGOs, etc.).

As the Team gained an understanding of the magnitude and the dimensions of the problem of conflict timber, they developed an analytical framework to identify the conditions under which timber is likely to become a conflict commodity, and to categorize these conditions in an analytically helpful way. Specifically, the framework was developed to analyze the interplay of the commodities, markets and governance characteristics of conflict timber incidents in Asia and Africa. The draft analytical framework was then presented in a workshop to a broad range of stakeholders from within USAID, and feedback from this workshop was used to revise and finalize the analytical framework (described in Section 2). This framework was then used in finalizing the country-level conflict timber profiles/regional characterizations, and in developing the in-depth country case studies.

The results of Phase I documented a broad range of Type 1 and Type 2 conflict timber incidents, in both Indonesia and the Democratic Republic of the Congo (DRC). As the two countries shared certain other similarities, i.e., large size, serious governance problems, ongoing insurgencies or, in the DRC case, a long-running civil war, the team decided to focus on these two countries for the in-depth country case studies comprising Phase II.

The study identified four interrelated characteristics common to conflict timber incidents in Asia and Africa. These are documented in Section 3 of this report—and further described in Section 4, Key Findings—but are worth mentioning here, as they will help to frame the complex problem of conflict timber for the reader.

First and foremost, **there is a direct and strong link between conflict timber and poor, inequitable systems of governance.** Conflict timber incidents almost always occur in states characterized by poor governance. In many cases, these same polities can fairly be characterized as failed states unable, in the territory they nominally control, to make and systematically apply rules that citizens will accept as legitimate and binding. High levels of corruption, often associated with poor governance, make it even more difficult to establish binding rules governing and regulating access and use of forest resources.

Furthermore, when governance is poor and the state is unable to suppress insurgencies, government opponents raise claims to parts of the national territory. This may, as in the DRC during the civil war, at least temporarily discourage logging by heightening insecurity in forested areas. But if, as in Burma, such groups can set up arrangements to enable logging firms to harvest timber, they can profit from those operations and will usually collaborate in them, often condoning unsustainable harvesting methods.

Second, **governments are almost always complicit in conflict timber activities.** Governments, in the form of the military and other security forces, are almost always involved in the exploitation of timber as a conflict commodity. The difficulty of exploiting timber, particularly the infrastructure needs associated with the industrial harvesting and transport of a bulky commodity, requires both coordinated manpower and skills, and capital equipment. In addition, timber exploitation requires secure access from forests to markets. Taken together, these requirements for exploitation mean that state-based organizations, such as military units and government-backed logging companies, are more likely to engage in conflict timber operations than are rebel groups—unless the latter can both guarantee access to markets, and contract with logging firms that command the necessary equipment and skills.

Third, **loose financial oversight generates incentives for powerful individual actors (military, police, politicians) to engage in conflict timber activities.** In almost every incident of conflict timber examined in this study, there was evidence that the powerful actors involved enjoyed quasi-guaranteed access to channels for moving money out of their countries, such as unregulated “private” banks, money transfer shops (typically open to anyone), bulk cash transfers that can be moved across very porous borders, and so forth. These individuals have the knowledge to identify safe havens in which to bank both illicit and licit proceeds of timber operations. When such officials play a lead role in these kinds of operations, it is not difficult to divert some of the proceeds to personal accounts. Being able to profit personally from conflict timber operations serves as a strong incentive to encourage some actors to *participate*.

And fourth, **ambiguous land/resource tenure promotes struggles over timber.** Ambiguous land tenure claims in forested areas strongly increases the potential for conflict timber incidents to flourish. If governments prove unable or unwilling to adjudicate conflicting claims—often because the rule of law is problematic—a test of strength becomes the only way to resolve competing claims. In such cases the stronger of the two claimants, often an agent of the state, is almost certainly destined to “win.” Furthermore, while carefully planned and executed decentralization may well improve the land/resource tenure situation in local settings, hurried devolution can create doubt as to who is in charge. In this scenario, numerous actors may come forward with claims to the same piece of land, each substantiated by some level of authority—further increasing the likelihood of conflict.

The results of this study indicate that both variants of conflict timber are significant phenomena. Both result in significant impacts on the physical, economic and social well being of individuals and communities living in and around forests affected by conflict. Conflict timber is undeniably a *crosscutting* problem. Efforts to tackle conflict timber and associated economic, social, environmental and financial issues inevitably will require solutions that address the major underlying cause of conflict timber—poor governance.

The specific commodity, market and governance characteristics giving rise to, or sustaining an incident of conflict timber differ from one location to another. There is no programmatic “silver bullet” capable of successfully addressing all incidents of conflict timber. Rather, the findings of this study show that to successfully decrease the incidence, longevity or severity of conflict timber incidents, well-reasoned and crosscutting programmatic responses need to be developed on a case-by-case basis.

I.0 BACKGROUND

I.1 Background

Throughout the world forests constitute important economic resources.¹ This is especially true across much of the developing world, where forest resources not only generate revenue streams and export earnings for governments, but also directly support the livelihoods of individuals and communities living in and around forests. Unfortunately, their high economic value often brings timber and other forest resources—and the people who live in close proximity to these resources—into the center of violent conflicts. Given the scarcity of forest resources due to rates of deforestation—especially of high-value tropical hardwoods—the incidence of forest resource-related conflicts seems destined to increase.

Conflicts involving forests can generally be divided into two types. In the first, timber and other forest products are harvested and sold, specifically to finance armed conflict, resulting in both loss of lives and displaced populations. In such cases timber, a reasonably valuable commodity with a well-established global market, is readily traded for cash or arms—providing combatants with the means to initiate and/or prolong conflict. The governments of Liberia and Burma, among others, have certainly supported the exploitation of timber resources to this end—using the proceeds from timber sales to, in part, finance prolonged armed conflicts that have resulted in both numerous deaths and large numbers of internally displaced persons (IDPs) and refugees. In the second type, conflict over forest resources, and in particular timber, erupts between or among stakeholders with rival claims to control or ownership. This can take various forms. For example, conflict over resource ownership or access can occur between a village and a governmental body (e.g., the military or the forest service), between a village and a private sector operator (e.g., a logging company/concessionaire), or between two villages.

Whether a conflict is financed or sustained through the harvest and sale of timber (Type I), or emerges as a result of competition over timber or other forest resources (Type II), both are manifestations of **conflict timber** (see Boxes 1 and 2 for examples of each type). *Economically*, conflict timber can be characterized as

Box 1. Liberia – An Example of Type I Conflict Timber

In Liberia, warlord President Charles Taylor has clearly used conflict commodities, namely timber and diamonds, to finance his military operations domestically in Liberia and across the Mano River States. As documented by Global Witness and others, harvested timber is transported to Liberian ports where it is bartered to Chinese and other trading partners either directly in exchange for weapons and munitions needed by Taylor to carry on his wars, or is sold to raise funds to achieve the same end. Those individuals and communities who survive the ensuing conflicts become IDPs, or they flee to neighboring countries to escape the carnage at home.*

* In late June 2003, it was estimated that Guinea alone harbors in excess of 200,000 Liberian refugees.

diverting financial flows away from the governmental and livelihood systems, lowering the earning potentials of both governments and rural communities. Further, conflict timber diverts timber flows away from established marketing channels, and unfairly competes with timber originating from sustainably managed forests. *Socially*, conflict timber can displace whole communities and destroy traditional social and livelihood systems. *Ecologically*, conflict timber is harvested with little regard for the renewable potential of the resource. This, in addition to destroying the long-term economic potential of the resource, also neglects the ecological and economic consequences associated with deforestation, habitat destruction, loss of biodiversity, soil erosion, siltation of rivers, etc. *Politically*, conflict timber builds off of a weak and inequitable governance system,

¹ While forests clearly constitute a range of valuable resources, the scope of this study focused primarily on timber. However, it should be noted that other forest resources (e.g., non-timber forest products [NTFPs]) have also been the source of Type 1 and Type 2 conflicts.

supporting the powerful in the exploitation of the weak. Likewise, the characteristically deceitful businesses arrangements associated with conflict timber undermine the rule of law, further exacerbate corruption, and threaten civilian control over the military—providing an arena in which unsavory, and often criminal, elements thrive.

I.2 Origins of the Study

In September 2001, in response to the growing recognition of the connection between forests, logging and conflict, United States Agency for International Development (USAID) Administrator, Andrew Natsios, asked the Office of Transition Initiatives (OTI) to lead an Agency effort to develop an Action Plan to address the conflict elements of logging. Based upon extensive internal consultations, OTI, with technical assistance from the Asia and Near East (ANE) Bureau, delivered the Action Plan to the Administrator in January 2002.² While the Action Plan identified illustrative steps the Agency could take to monitor and reduce conflicts over timber, it also noted a general lack of information, and moreover a lack of careful analysis of the nexus between the economic, financial, political, ecological, social and security aspects of conflict timber.³ In an effort to address these informational and analytical gaps, and as a first step toward developing the foundation for well-targeted and effective programming, the Action Plan called for further analysis of the problem of conflict timber. To address these needs, Democracy, Conflict, and Humanitarian Assistance (DCHA)/OTI and ANE/Technical Support (TS) jointly designed and commissioned the *Conflict Timber: Dimensions of the Problem in Asia and Africa* diagnostic analysis.

Box 2. Vietnam – An Example of Type 2 Conflict Timber

In Vietnam, the government's long-running effort to resettle ethnic Vietnamese in highland areas, as a means to controlling indigenous hill groups (*montagnard*) suspected of seeking independence, has pushed these groups into conflict, stemming from competition over forest resources. In an effort to support the resettlement, the government has allowed large forested areas inhabited by the *montagnard* to be logged. The government has also provided ethnic Vietnamese with the incentives to move in (e.g., land titles, access to inputs, etc.) and plant coffee. This change in demographics and land use patterns has considerably impoverished the forest-dependent *montagnard* groups—and given the government's stance, the conflicts seem set to continue into the future.

I.3 Objectives of the Study

The primary objective of this task order was to provide a careful, comprehensive and nuanced examination of the economic, ecological, political, social and security dimensions of conflict timber in both Asia and Africa.⁴ In addition, the Team was also asked to conduct the analysis in a way that would broaden and deepen the understanding of conflict timber within USAID.

Specifically, the goals of the analysis were threefold:

1. To examine the dimensions of conflict timber at the regional, country and local levels. At the regional level the Team was asked to describe the extent and ramifications of conflict timber within Asia and Africa, focusing on intra-regional variations, cross-border and international trade. This regional-level analysis was to be supplemented by an in-depth examination of conflict timber in one country from each region, Indonesia and the Democratic Republic of Congo (DRC). The in-depth examination was

² "Illegal Logging and Conflict: Action Plan," January 23, 2002.

³ Global Witness and other advocacy nongovernment organizations (NGOs) have prepared exposes of conflict logging in Cambodia, Liberia and DRC. While these investigations have done much to increase international recognition of the problem, they have not provided a sufficiently detailed analysis on which to base USAID programming.

⁴ While conflict timber incidents clearly occur elsewhere (e.g., South America, Europe and Eurasia), the geographic scope for this activity was limited to Africa and Asia.

designed to yield an analysis of the dimensions of conflict timber at the national level, as well as an understanding of the impact of conflict timber on forest-dependent communities.

2. To assess the role of forests in peace processes.
3. To identify programmatic responses that the Agency could take in response to conflict over forest resources and conflicts financed by timber. These recommendations were to include both those activities that should be a part of OTI- or Mission-sponsored country programs as well as those that should be incorporated into regional or global programs coordinated by USAID/Washington.

Results of the diagnostic, vis-à-vis these three objectives, are discussed in detail in Volumes II and III, and are highlighted in Section 3 of this report. Key findings, stemming from these results, are presented in Section 4, and these form the basis for the recommended programmatic responses for USAID, which are presented in Section 5.

I.4 Task Order Implementation

I.4.1 Team Composition

The core Conflict Timber Team (the Team) was comprised of two interdisciplinary, regional teams. Each regional team included:

- An ecologist or forester familiar with the flora of the region and the history of its exploitation, particularly as far as logging is concerned;
- A political scientist familiar with the region and with the general features and range of governance arrangements found there;
- A forensic economist (the same individual for both regions) skilled in identifying patterns of illicit financial flows—both through the Internet and on the ground—and knowledgeable about money laundering and institutional arrangements to combat these patterns; and
- Security specialists familiar with both policing arrangements and military organizations, strategy, weapons flows, etc.

Two additional specialists, a natural resource management and governance specialist and a workshop facilitation specialist assisted the core Team in Phase I of the diagnostic. Team members offered both extensive regional experience, and collectively, a capacity to examine the problems and dynamics of conflict timber from a multidisciplinary perspective.⁵

I.4.2 Task Order Implementation (September 2002-June 2003)

The Conflict Timber Task Order was implemented in two phases, beginning in September 2002 and concluding in June 2003. Phase 1 (September-December 2002) focused on gathering, reviewing and analyzing a broad range of information on conflict timber. To begin characterizing the magnitude and dimensions of the problem at the global and regional levels, country-level conflict timber profiles were developed for 15 countries from Asia and Africa. In order to develop these profiles the Team processed information on conflict timber from a range of sources (e.g., official and NGO reports, newspaper

⁵ In Phase II, some Team members were supplemented or, in some cases replaced, by Indonesian or Congolese specialists with extensive knowledge of their countries and special skills in social science, political science and forestry.

accounts, interviews with key informants and stakeholders within the US government/United Nations [UN] agencies/international finance institutions/NGOs, etc.).

As the Team gained an understanding of the magnitude and the dimensions of the problem of conflict timber, they developed a draft framework for use in analyzing conflict timber. The draft analytical framework was then presented in a workshop to a broad range of stakeholders from within USAID, and feedback from this workshop was used to revise and finalize the analytical framework (described in Section 2). This framework was then used in finalizing the country-level conflict timber profiles/regional characterizations, and in developing the in-depth country case studies.

The results of Phase I documented a broad range of Type 1 and Type 2 conflict timber incidents in both Indonesia and DRC. As the two countries shared certain other similarities, i.e., large size, serious governance problems, ongoing insurgencies or, in the DRC case, a long-running civil war, the Team decided to focus on these two countries for the in-depth country case studies comprising Phase II.⁶ Building upon the results of Phase I, the country case studies were designed to gather additional information on the dimensions of conflict timber in each country. This included an analysis of the status, trends and agents of conflict, and the factors contributing to the conflict in these key areas (including, but not limited to, governance problems and corruption, regulatory framework, market forces and competition over resources). The Team also analyzed the impacts of these conflicts on communities and clarified the links among forests, conflicts and poverty.

I.5 Structure of the Synthesis Report

The results of the *Conflict Timber: Dimensions of the Problem in Asia and Africa* diagnostic analysis are presented in three volumes. Volume I, *Synthesis Report*, provides relevant background to the study, highlights the analytical framework used and provides summaries of regional findings from Asia and Africa, before moving on to a discussion of the key findings and the recommended programmatic responses for USAID.

Volume II (*Asian Cases*) and Volume III (*African Cases*) present the results of the country-level conflict timber profiles, and the in-depth country case studies. Each volume contains sections that provide the necessary background to the study, a regional overview and characterization, and the country-level conflict timber profiles, and the in-depth country case studies.

⁶ Also, both Indonesia and DRC are currently USAID-assisted countries.

2.0 ANALYTICAL FRAMEWORK

2.1 Introduction

In order to develop effective policy responses to conflict timber, it was first necessary to identify the conditions under which timber is likely to become a conflict commodity. Toward this end, the analytical framework developed and utilized in this diagnostic seeks to identify those conditions, and categorize them in an analytically helpful way.

The analytical framework utilized in this study traces its intellectual origins to the “industry structure” literature, which emphasizes the characteristics of specific traded commodities, the market arrangements through which demand for these commodities is articulated and met, and the characteristics of the governance structures that determine the terms and conditions—in effect, establishing the framework under which commodities are traded. These three factors—commodities, markets and governance—shape the dynamics of the complex interactions concerning conflict commodities as well as those for commodities acquired and exchanged under more peaceful circumstances.⁷

Box 3. General Sources of Conflict Timber Incidents

- Commodity-specific characteristics
- Market characteristics
- Governance system characteristics that shape markets at country and global levels

Based upon this framework it was assumed that the causes of conflict timber incidents would be found in three general sources: commodity-specific characteristics, characteristics of markets, and characteristics of governance systems that shape markets both at the level of individual countries and in the broader global context. Each of these categories overlaps; none is mutually exclusive.⁸ The Team hypothesized that the relationship among the three characteristics would influence whether or not forest resources would become flash points for

conflict. The nature of this diagnostic analysis was intended to identify these characteristics as clearly as possible, in an effort to facilitate development of targeted interventions that will reduce the probability and severity of conflict.

2.2 Commodities

Box 4. Six Attributes of a Conflict Commodity

- Accessibility
- Importance to people's livelihoods
- Lootability
- Weight-to-value ratio
- Concealability
- Fungibility

Apart from the characteristics of the markets for specific commodities, the Team found that each individual commodity has six attributes that make it more or less likely to become a conflict commodity: *accessibility*, *importance to people's livelihoods*, *lootability*, *weight-to-value ratio*, *concealability* and *fungibility* (the capacity to be used to produce a variety of end products). Of these characteristics, four seem to predispose conflict entrepreneurs to utilize a commodity to fuel Type 1 conflicts: accessibility, lootability, concealability and weight-to-value ratio. By contrast, importance to people's

livelihoods is the key characteristic that engenders competition among user groups and can touch off Type 2 conflicts. Depending on the forest product, accessibility, lootability, concealability and weight-to-

⁷ Walker, Tjip. 1998. *Both Pretense and Promise: The Political Economy of Privatization in Africa*. Bloomington, IN, University of Indiana: Department of Political Science, unpublished Ph.D. dissertation.

⁸ Land tenure, for instance, has both commodity-specific characteristics (e.g., different rules typically apply to forested lands than to arable land cultivated for rice or wheat) and governance-specific characteristics (e.g., the enforcement and adjudication of competing claims depend on the capacity of the state to operate a judicial system whose rulings litigants consider legitimate and will accept as binding).

value ratio characteristics can support Type 2 conflicts. If users find that they can get access to mushrooms with high weight-to-value ratios, and can easily loot and conceal them, fierce competition to capture mushroom stocks may erupt into Type 2 conflict.

By contrast, timber may be easily accessible but requires special skills to loot and may be difficult to conceal and transport. But all users are not created equal. More powerful and better endowed users—for example, governments or private sector companies (logging concessionaires in many parts of the world) may have the means (both the physical means and the means to access markets) to harvest higher value timber that local users in, for example, Burma, Vietnam, the Philippines or Liberia would prefer to leave standing. This can lead to Type 2 conflicts, as it has in Burma, Vietnam and the Philippines. But in Liberia, rural residents have seized opportunities created by logging to colonize new deforested areas for farms.

The section below explores these six commodity characteristics in greater detail.

- *Accessibility.* Conflict actors are more likely to exploit resources to which they can gain access cheaply and easily. Timber, in contrast to minerals, stands above ground in full view, and crude roads or rivers can provide access to and export routes for trees in many forests otherwise considered remote. These circumstances expose them to exploitation for commercial and conflict timber purposes, among others. Armed groups (military detachments, police and insurgents) can, on the other hand, with relative ease interdict transport along roads and waterways, limiting accessibility and the likelihood that timber will be harvested to pursue either conflict or peaceful goals. Those same groups—they are, not infrequently (e.g., in Indonesia), state army or police units—can erect barriers along roads and waterways to “tax” wood shipments (i.e., collect rents on the trade in timber).

All forests are not the same in terms of economic exploitation strategies, which further impacts on accessibility. The dipterocarp (*Dipterocarpaceae*) forests of Indonesia consist, for example, of species of the same botanical family, almost all of which are tropical hardwoods of considerable value. Forests of this composition can economically be *clear cut* (all standing timber is felled) when the object is simply to provide wood fiber, for example, to pulp and paper mills. When the object is to harvest fine timber for higher value uses (e.g., production of furniture), selective felling techniques are utilized. By contrast, forests in the DRC and in most countries in Africa tend to be highly diverse in composition. High-value species are intermixed with many other species of little commercial value. In consequence, such forests cannot economically be clear cut, but must be selectively cut or *high-graded*, meaning that logging companies must seek out, fell and extract only those trees sufficiently valuable to warrant the costs of harvesting and transporting them to market.

- *Importance to people’s livelihoods.* Forests, unlike oil or alluvial diamonds, usually generate a range of products and critical services on which people depend immediately and directly for their existence. Therefore, indiscriminate harvesting of such forests (e.g., through clear cuts) is more likely to generate conflict. It also seems likely that people highly dependent on forest resources for their subsistence may be more prone to engage in conflict when they observe other users felling “their” forests.
- *Lootability.* Resources that can be seized and transported easily are more likely to be used to fuel conflicts. Timber is more easily looted than oil, but less easily than surface deposits of diamonds, gold or coltan (a mineral indispensable to the operation of cell phones).
- *Weight-to-value ratio.* The higher its weight-to-value ratio (e.g., diamonds), the more attractive a commodity becomes to looters.
- *Concealability.* Non-state actors can more readily exploit, transport and market commodities that can be hidden from the view of government officials and security forces. Conflict commodities that

cannot be easily hidden, like timber, must generally be exploited with the explicit, overt connivance or assistance of actors connected to the state, often security forces (police, customs officials, military, etc.). This creates clear opportunities for state actors to extract rents from illicit trade in timber for a variety of ends (e.g., funding security force operations, personal enrichment, etc.).

- *Fungibility.* Commodities that can be put to many uses are more likely to be exploited by conflict actors; logs, in comparison with diamonds, have many potential uses and serve as inputs to many end products that vary widely both in size and form.

2.3 Markets

Box 5. Some Market Characteristics

- Assured demand in global markets
- Numbers of sellers and buyers
- Capital intensity of production process

Markets are indispensable to the conflict timber equation. Markets enable conflict actors to convert a commodity into cash. In Type 1 conflict timber cases, cash can then be exchanged for weapons, ammunition, and other means of war.⁹ In Type 2 conflict timber incidents, cash enriches the stronger actor, and can provide the means to secure support (e.g., through the provision of uniforms, salaries, food and other supplies). Valuable forest products can encourage

encroachment and exploitation, sometimes by local user groups seeking to secure control of future sources of inputs vital to their production systems. Perhaps more often, high-value forest resources encourage encroachment by non-resident actors (e.g., entrepreneurs, officials and state security forces) intent on establishing control of wood resources to provide wood supplies for sawmills, plywood mills, furniture factories, pulp and paper mills, and for export into broader regional or international markets. In either case, the overall motivations are most often financial in nature. This push to secure access to forest resources increases competition, and often ignites violent conflicts, especially where land/resource tenure is ambiguous.

Some market characteristics that may suggest whether (or how) timber contributes to conflict include:

- *Global market.* Assured demand for a commodity is essential to conflict entrepreneurs' capacity to exploit it to gain financing for a planned or ongoing conflict. The importance of a range of forest products to local production systems can also unleash conflict when resources users perceive a danger that demand will overwhelm foreseeable supplies.
- *Numbers of sellers and buyer.* When both are large, individuals are essentially anonymous, and conflict actors can more easily enter the market. Timber is easier to exploit than, for instance, crude oil because, where the major players—oil and gas companies—are named and known, their activities can be more easily tracked. By contrast, small firms or even a few skilled individuals can harvest and market timber, making it more difficult to track such activities.
- *Capital intensity of production process.* When little investment is necessary to produce a commodity, conflict actors are more likely to exploit it. Timber is easier to exploit than oil since timber is usually more accessible than petroleum deposits, and can be harvested with much less investment. Unprocessed logs can be sold more readily than unprocessed crude oil. Roundwood can be converted into a variety of end products without complicated, expensive transformation processes of the sort involved in refining crude petroleum into fuels, lubricants and feeder stocks for plastics.

⁹ In some instances, e.g., Liberia, valuable raw logs have been bartered for arms.

2.4 Governance

Box 6. Some Attributes of Poor Governance

- Lack of accountability
- Inability to make/enforce rule of law
- Low and declining social welfare
- Lack of social heterogeneity
- Weak or absent civil society groups
- Land/resource tenure issues

Poor or weak governance often contributes to the initiation of conflict, and hinders the resolution of ongoing disputes. Governance shapes both the markets within which commodities are traded, and the wider context of rules and institutional arrangements within which economic activity occurs in a country. Many aspects of poor governance are not specific to conflict timber, but are worth summarizing even though they are well known to practitioners in the field of democracy and governance. These include:

- *Lack of accountability.* Unaccountable governments tend to place the interests of the state and/or its officials above those of society, which in turn often creates popular grievances against the state or its allies (e.g., crony businessmen and corrupt officials).
- *Rule of law.* This concept encompasses the making and enforcement of rules in the broadest sense—where governments are unable to make and enforce laws and regulations in a consistent manner, and adjudicate disputes in ways that litigants and other members of the society accept as legitimate, rights to property/resources are more likely to be established by force, thereby increasing the probability of conflict. Furthermore, property rights in such systems can never be established in any definitive sense as they are constantly subject to “redefinition” by the strongest actor at a given point in time. Such systems can be best described as “rule of men” rather than “rule of law” systems because the rules, in any given case, are dependent upon the constitution of the disputants.

In the absence of an autonomous and free judiciary, conflicts are generally resolved in ways that suit government interests. If the judiciary is corrupt, judges and other judicial system officers can auction off decisions to the highest bidder in a case. This leads to *capricious*, rather than *consistent*, application of rules and makes it very difficult to know in advance the rights of the parties in a particular case.

In many developing countries *inequity, rather than equity*, characterizes the development, and/or the application of laws and policies. Laws, or the application thereof, that are considered inequitable often contribute to conflict over forest resources. If indigenous communities in Indonesia, the Philippines or Vietnam, for example, believe that they have legitimate claims to forest land (through long occupation and usage, etc.), they may feel that central or local government decisions allocating those lands to logging concessionaires without regard to their claims are highly illegitimate because they fail to take any account of the equities in such situations, and make no effort to accommodate the interests of indigenous communities. In these cases competition with outside forces may lead local user groups to engage in conflict to protect “their” resources.

- *Social welfare.* Low and declining welfare levels, often associated with state failure, increase the likelihood of conflict. People who are desperate for public services (such as primary medical care) may feel that they have little to lose by fighting.
- *Social heterogeneity.* Although diversity itself does not cause conflict, strong group identities based, for example, on ethnicity or religion, reduce the cost of organizing and thereby increase the probability that aggrieved parties will mobilize along those lines. The so-called “hill” ethnic groups in Burma, Christian *montagnard* in upland areas of Vietnam and ethnic groups in eastern DRC (the Hema and Lendu), all confirm the role of social heterogeneity in enabling groups to engage in conflict.

- *Civil society.* When activist groups are weak or absent, and as a result exercise little public oversight, governments and their officials are more likely to pursue their own interests and neglect those of society at large. Media play an important role here as well: if they conduct robust, accurate investigations and report their findings, government officials, police and military officers, logging company heads and others face a much greater degree of transparency than if they can co-opt, dominate or intimidate media organizations and journalists.

In the case of timber-rich areas, another aspect of governance takes on special importance:

- *Land/resource tenure.* In many former colonies, conflicting tenure frameworks exist for determining who has rights to forests and forest products. Broadly speaking, indigenous systems that assign rights to a local community based on occupation and long usage frequently clash with imported systems that often date to the colonial era. The latter, as a general rule, grant the state control over forests, ostensibly in the interest of the entire nation.

Furthermore, forestry has historically been a conservative sector, with policies, laws and implementing rules and regulations slow to adapt to changing circumstances.

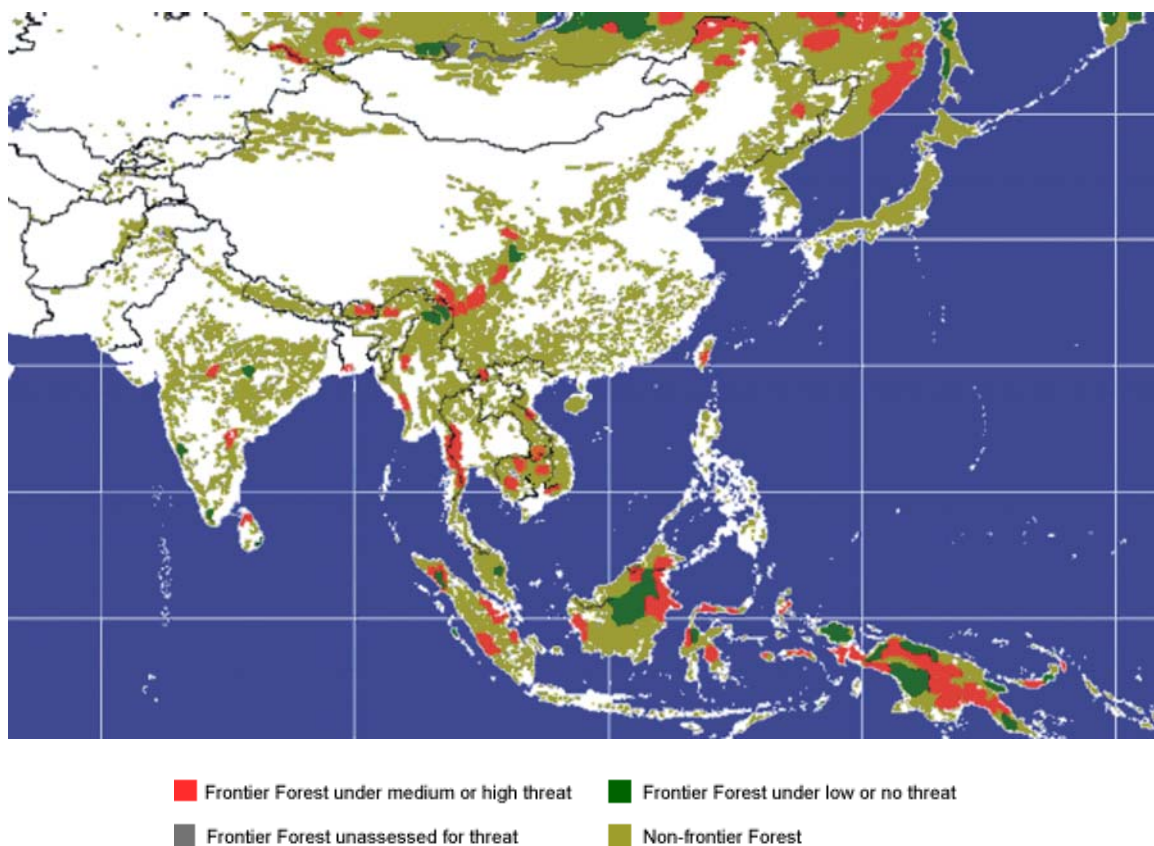
3.0 REGIONAL SUMMARIES

This section briefly summarizes findings from both Asia and Africa. Some of the countries profiled are mentioned and summary findings are presented. Summaries from the Indonesia and DRC country case studies are presented in one-page text boxes. In conclusion, this section highlights the similarities and differences between conflict timber in Asia and Africa. For far more detailed analyses, readers are encouraged to consult Volume II and III, which contains both the regional and country profiles, and the in-depth country case studies for Asia and Africa.

3.1 Asia Regional Summary

Country-level conflict timber profiles were developed for ten Asian countries where conflict timber interactions occur: Afghanistan, Burma, Cambodia, India, Indonesia, Laos, Nepal, Pakistan, the Philippines and Vietnam. Of these ten only half—Afghanistan, Burma, Indonesia, Nepal and the Philippines—currently involve possible efforts to tax or convert timber (or other forest products) into means to finance conflict (Type 1 conflict timber). All ten countries are currently experiencing some level of Type 2 conflict arising from competition over forest resources, although the characteristics and the rates of incidence vary markedly. Figure 3.1, reproduced from Volume II, provides an overview of contemporary Asian timber resources.

Figure 3.1. Forest Resources in Asia



Source: World Resources Institute: Forest Frontiers Initiative

Box 7. Conflict Timber in Burma

In **Burma**, the military junta has sought to checkmate the so-called “hill tribes” that have long resisted control by the lowland Burmese. Many of Burma’s forests are found in the highlands and have afforded the hill tribes effective shelter against attacks mounted by the Burmese military. In an effort to expose the hill tribes to more effective central government control, the junta authorized Thai logging firms to harvest teak and other woods in forests along the Thai-Burma border. In addition, the current Burmese regime has negotiated logging concessions with the PRC. The latter, desperate for wood during a period when domestic supplies have been limited, resulting in a self-imposed domestic logging ban, jumped at the opportunity to harvest and import wood from northern Burma. For the Burmese junta, the prospect of numerous logging roads constructed within the northern forest lands proved particularly attractive, as logging roads radically improved their access to the heartland of hill tribe forest sanctuaries. Finally, the hill tribes themselves have engaged in logging, or authorized logging by Thai firms in exchange for licensing fees with which they have financed their resistance to the Burmese regime. *

* See Volume II for more information.

In contemporary Asia, Type 2 conflict timber incidents arguably constitute both the dominant trend and potentially pose the most serious threat to human populations and the environment. Destruction of forests reduces or eliminates the *environmental services* they provide—most importantly water control in areas of high rainfall where human populations depend heavily on rice culture to sustain themselves. Logging operations that impair food production capacity might well exacerbate violence among different ethnic groups, as people begin to prey upon each other in attempts to capture food and other resources necessary to ensure their survival.

The demand for wood fiber in Asia is significant, and can be attributed to two quite distinct sources. The first services household domestic needs—for fuelwood, building poles, furniture production and

the like. The second derives from export markets, both for raw wood (roundwood or unprocessed logs), a variety of processed lumber, or more finished products (e.g., teak garden furniture and paper products). Viewed from a macro perspective, most Asian countries demand a significant amount of wood for household needs. But four countries in particular contribute to strengthening demand in the region for wood products. Malaysia and, to a lesser degree Thailand, have major wood-processing economies with many companies involved in those operations, and often target export markets.

The People’s Republic of China (PRC) imposed a domestic logging ban in the mid-1990s. That ban is reportedly enforced with considerable care and severity. As a result, China now seeks to supply its entire domestic need for wood and wood fiber from external sources. Forests throughout Asia and, indeed, in many countries in West and Central Africa, are now being logged to meet the Chinese demand.

Demand for forest resources, particularly timber, can be characterized as intensifying in many places in Asia. That demand can be expected to contribute to financing some conflicts and engendering others as

Box 8. Conflict Timber in Cambodia

Forest cover in Cambodia fell from 75% in the early 1970s to less than 35% in the mid-1990s. Most of this forest loss was due to illegal, but officially sanctioned, logging by the Royal Cambodian Armed Forces and the Khmer Rouge. Timber revenues from these activities were used to finance arms procurement by both the Cambodian Armed Forces and the Khmer Rouge forces based along the Thai border. The illegal timber trade with Thailand earned the Khmer Rouge an estimated \$10 million a month in 1992.¹

In November 1995, Cambodia’s two prime ministers secretly granted concessions covering 6.3 million hectares of forest—three times the area that can support commercial logging—to 30, mainly foreign, logging companies. Seven of the companies received tax breaks for exports and profits. The revenues from these operations almost entirely bypass the national budget and represent an absolute loss to the country of at least US \$117 million for the period January 1996 to March 1997. Following the collapse of the Khmer Rouge in 1996, and until the coup d’etat in July 1997, these revenues helped finance the campaigns of the co-prime ministers for the elections scheduled in November 1998. The coup was provoked in part by the import of weapons purchased using illegal timber revenues.*

* World Resources Institute, <http://www.wri.org/ffl/maps/as-ratan.htm>

competition for forest resources heat up in the face of over-cutting and dwindling supplies of natural forests that have not been replaced, thus far, by trees grown in artificial forests and plantations.

In **Indonesia** (see Box 9), many of the serious conflict timber incidents date back to the Suharto regime. Most of these involve efforts by pulp and paper mills and wood-processing plants to acquire wood supplies. In addition, the country's military and police forces are required to mobilize more than two-thirds of their operating budget from unofficial sources. Among other endeavors, harvesting and marketing timber, typically via private sector subsidiaries of domestic or foreign partner firms, or by levying impromptu tolls on private timber shipments, has offered police and military units the means to mobilize very substantial amounts of cash. This has, in turn, unleashed an unsustainable wave of logging in the country that threatens to damage rural agricultural, forest-based and fisheries production systems. Highly uncertain land tenure relations intensify conflicts between wood industry concerns and local communities. Many Indonesian communities have indigenous or customary (*adat*) land tenure systems, through which they have long organized access to and property relations concerning arable land and forests. Administrative and court officials, applying national legislation and rules derived therefrom,

Box 9. Indonesia: Type II Conflict Timber

In Indonesia, among conflict timber incidents, Type II interactions predominate. Rebel movements do exist in certain areas, e.g., Aceh and West Papua, but finance their military activities from sources other than timber. The major troubles in Indonesia, and the major threat to future peace, arise from logging and plantation operations that have cleared millions of hectares of *dipterocarp* forests throughout the islands. Deforestation menaces or destroys local production systems (rice culture), by impairing the environmental services that forests produce. Among the most important of these services are buffering soils against erosion in a country where annual rainfall may exceed 10 feet, and storing abundant precipitation for gradual later release, thus prolonging the growing season in irrigated parcels and permitting farmers to produce more than a single rice crop yearly. Farmers who see their production systems failing may redirect their resistance to some current logging operations into disputes with each other over remaining resources.

Such Type II incidents have their origins in:

- The Government of Indonesia's (GOI's) theory of property rights concerning forests, inherited from the Dutch colonial regime, which in effect denies local communities any say in who controls forests on village lands upon which they depend for survival;
- Precipitous implementation of a policy devolving authority over forests to district governments, creating a situation in which different levels of government and competing units within levels issue overlapping concessions, engendering among concessionaires an uncontrolled free-for-all;
- A culture of corruption that condones profiteering from official positions;
- Lack of judicial institutions and processes capable of upholding equitable legal processes (e.g., rule of law) where powerful actors—state officials, politicians, major companies—can use the law and legal proceedings to hound competitors and deny recourse to the less powerful, e.g., residents of rural communities whose lands and forests the powerful seek to exploit;
- Introduction of elected district and provincial governments without effective regulation of campaign financing arrangements. Among political candidates this has created strong demands for cash to mount electoral campaigns and intensified pressure to issue logging concessions to supporters to repay campaign debts;
- Economic policies dating to the Suharto regime that authorized construction of three huge pulp and paper mills engendering a *practically insatiable demand for wood*;
- Formal government policies that compel the police and military agencies to auto-finance two-thirds of their operating budgets, compelling them to raise money through logging as well as other businesses (e.g., tourist hotels, drugs, prostitution);
- Intimidation and corruption of media organizations by the powerful as a strategy to suppress coverage of and reduce transparency concerning their activities; and
- Lax controls over all kinds of financial transactions, which create abundant opportunities for individuals to protect profits from illicit activities and so create incentives for conflict timber interactions.

override *adat* regulations, effectively rejecting local arable and forested land tenure claims. This sets the stage for logging operations that override local interests and take little, if any, notice of local desires to conserve forests and use them sustainably.

3.2 Trends in Asia

The following 13 points summarize the trends and major problems associated with, or underlying, conflict timber in Asia.

1. Type 2 conflict timber incidents outnumber Type 1 incidents in contemporary Asia. Indonesia is the scene of the most active conflict timber incidents in today's Asia and there, conflict timber deaths, injuries and destruction of property are nearly daily events. In Indonesia, for instance, a survey of reports on conflict timber published in six regional papers over the course of twelve months (March 2002-February 2003) turned up 845 accounts, or better than two incidents per day. For reasons discussed in Volume II, Indonesian newspapers do not fully report all conflict timber incidents, even those occurring in their own areas of coverage, so that the probable rate of incidents is in fact somewhat higher. The violence involved in these incidents range from torture to shootings and intimidation to destruction of property and vegetation. Repeated attacks directed by private and public security forces against residents of rural communities who oppose logging operations traumatize those residents.
2. Both Burma and Cambodia have been the scene of intense Type 1 conflict timber incidents in the recent past. Cambodia first brought the concept of "conflict timber" to international attention, as remnant groups of the Khmer Rouge felled and sold large stands of tropical forest to acquire arms to continue their struggle against the government. In Burma, both government and rebels have authorized logging to finance their ongoing armed conflict with each other. The government contracted with the PRC to fell timber in northern Burma and, in the process, open logging roads into the forest refuges of rebel hill tribes so that government soldiers could more easily attack their opponents. Cambodia and Burma are the outstanding cases, to date, in Asia of ***Type 1 conflict timber incidents (conflicts financed by trees)***.
3. The Philippines constitutes a Type 1 case that began earlier than most other Type 1 cases in Asia. During the American colonial era and under the Marcos regime, logging companies cleared most of the country's forests. This led to severe environmental damage and destroyed the livelihoods and social structure of indigenous forest people. The New People's Army and, more recently, Muslim opposition groups, have successfully recruited adherents among people impoverished, at least in part, by deforestation, particularly in Mindanao.
4. The more pervasive conflict timber problem in Asia, as noted above, takes the form of ***Type 2 conflict timber incidents (conflicts among competing stakeholders over forest resources)***. In the contemporary era, Indonesia presents the most flagrant case in Asia of Type 2 incidents. Logging has sharply reduced forests in almost all the large islands of the archipelago. Until recently, Indonesia was, with the DRC (see Volume III) and Brazil, one of the three major remaining areas of tropical timber worldwide. Heavy logging of many Indonesian forests has damaged local environments in many places, and conflicts have erupted at numerous sites throughout the major Indonesian islands. Soil erosion and reduced, uncertain water flows take a toll on local irrigated rice production systems.
5. The range of cases makes it clear that Type 1 and Type 2 conflict timber incidents in Asia occur under a large variety of circumstances. Critical factors include the *characteristics of the commodity*, *characteristics of markets for the commodity* and *characteristics of governance systems in the country*.

where timber grows and is harvested. Dynamics among these factors play out in quite different ways in different settings, and produce the broad range of observed outcomes.

5. Demand for wood fiber in Asia is substantial. Indonesia is currently the scene of the largest number of Type 2 cases because its installed domestic wood transformation capacity, in the form of huge pulp and paper mills and large plywood factories, creates a correspondingly huge demand for wood fiber. Tree plantations have been unable to meet this demand, and plant owners have turned to natural forests to obtain wood supplies. To supply the ten million cubic meters (m³) of wood fiber that three pulp and paper mills require to function economically, natural forests have been decimated.
6. These kinds of economic pressures—wood and more wood at the lowest possible cost—create situations in which it is very difficult to work out productive solutions with rural residents living in or near forested areas to ensure sustainable production of wood supplies. Many companies have preferred to follow a preemptive strike strategy, riding roughshod over the interests of local communities in forest resources in order to meet their own demand for wood fiber.
7. As noted, the PRC has instituted a domestic logging ban in the wake of disastrous flooding. This means that the PRC's wood fiber needs must all be met through imports, creating an enormous demand for wood throughout Asia (and in Africa as well, for that matter).
8. Governments have almost always engaged as protagonists in major Type 1 conflict timber incidents in the region. This has been the case in Burma, Cambodia, Indonesia and the Philippines. This is hardly surprising as central governments seek to impose their authority over national territory and come into conflict with any forces that oppose that policy.
9. Governance figures as a key factor in many of these conflict timber situations. Again, the influence is case specific with, perhaps, one exception: most Asian countries, like most African countries, make very little effort to control financial transactions by private persons and entities. It is almost always possible to move funds, whether of licit or illicit origin, out of the country in which they were acquired. Governments rarely document such transfers, with the result that those in position to acquire funds from any source have a standing incentive to do so because they can export and bank or invest those funds without leaving any paper trail. The list of money transfer mechanisms is long: private banks, ill-controlled public banks, money transfer shops (*hawalas*), bulk cash smuggling (border controls are usually such that borders may be described as “porous”), offshore banking zones and casinos. The last offers an easy means to launder money: illicit funds are used to buy gambling chips. When the chips are cashed in, proceeds are described as “gambling winnings,” effectively laundering the funds in question.
10. A significant source of timber-related conflict in many Asian countries arises from state (and, increasingly, local government) assertions of authority over and ownership of forest resources found on the national territory or in the local jurisdiction. This assertion makes no allowance for local residents' perceptions that forests growing on community lands belong to the people who have occupied those areas for decades, sometimes for centuries (e.g., in Vietnam, the Philippines and Burma). From the perspective of local users, this creates a serious equity problem. It also destroys whatever confidence may exist in supra-local governance institutions.
11. Specific aspects of governance arrangements in particular countries can play powerful roles in encouraging conflict timber incidents. In Indonesia, for instance, the military and police forces must mobilize approximately two-thirds of their operating budgets, not from the national treasury, but from revenue-generating operations that they control. Among these are tourism, prostitution, gambling, drug sales and smuggling and, not surprisingly, logging and timber sales, either directly or by levying

“tolls” at impromptu road blocks that police and military units set up to tax logging trucks and vehicles transporting lumber.

12. In most Asian countries judges lack autonomy from political pressures. Under the circumstances, judiciary system employees often engage in corruption. This creates situations in which the application of laws is capricious rather than consistent (in the manner idealized in many Western legal systems). The powerful and the wealthy can use the legal system to achieve their objectives, either by intimidating or corrupting judges to achieve the legal decisions that they desire.

3.3 Africa Regional Summary

Country case studies were developed for five African countries where conflict timber interactions occur: DRC, Gabon, Guinea, Liberia and Sierra Leone. Of these, four—Liberia, Sierra Leone, Guinea and DRC—currently involve Type I conflict. Some limited Type 2 conflict timber interactions have been reported in Gabon. These cases appear in Volume III, on Africa. Figure 3.3, reproduced from Volume III, provides an overview of contemporary African timber resources.

Figure 3.2. Forested Areas in Africa



In forested (or formerly forested) area of Africa, conflict timber poses potentially grave problems. To date, Type I incidents of conflict timber (conflict fueled by timber) outnumber Type II incidents (conflict over timber resources). Given the rate at which deforestation is proceeding in West Africa, however, the costs of Type II conflict have not yet registered in any significant degree.

The toll of conflict in contemporary Africa in terms of human lives lost is stark. *Estimates* of war-related deaths in eastern DRC range from 3.3 to 4.5 million. A relatively small percentage of these, however, are battlefield deaths. Many result from wartime disruption of basic social services such as healthcare, and from starvation, as farmers living in war zones have been unable to plant, cultivate and harvest crops with any regularity, or protect what they do manage to produce from armed soldiers and rebels foraging for supplies.

The fate of war zone residents can further exacerbate problems. Families, forced to flee for their lives, become either domestic refugees (IDPs) or international refugees. Estimates of refugee populations vary, understandably, as renewed waves of warfare and violence sweep through these countries and force thousands of individuals to abandon their homes. In late June 2003, thousands of IDPs were crowding into Monrovia, Liberia, seeking to escape the war between President Charles Taylor and Liberian insurgents. As IDPs and refugees seek means to sustain themselves away from their home areas and hold their families together, they often invade poorly protected forested areas in search of housing materials, bush foods and products that they can sell for the cash they need to survive.

Box 10. Liberia

Liberia constitutes, by all accounts, the lead case of conflict timber in the African region. The current president, Charles Taylor, is both a convicted felon and, as of 5 June 2003, under UN indictment for war crimes. After escaping prison in the US, Taylor returned to Liberia, his home country, and embarked on a war of conquest. He financed this operation with conflict commodities, notably conflict timber harvested in both Liberia and neighboring Sierra Leone and conflict diamonds mined in Sierra Leone. Once in power, he ran for and was elected to the office of President of Liberia. From that post he orchestrated a series of activities designed to destabilize other states in the Mano River Union (Sierra Leone and Guinea). Warfare within Liberia has produced thousands of IDPs, and thousands more have sought refuge in Guinea, the Ivory Coast and, occasionally, in Sierra Leone. Taylor has licensed a small number of logging companies to harvest timber in many parts of the country. He has authorized these firms to hire militias to protect their operations from local resistance or attacks as they see fit. In return for the presidential authorization to engage in essentially unregulated logging in Liberia, the logging firms have provided Taylor with a continuing flow of roundwood, which he has in turn bartered for arms to continue his campaign of domination in Liberia and destabilization in neighboring countries.

Breakdown of community and even family institutions, and the socialization processes associated with them, bodes ill for the future. The widespread phenomenon of child soldiers, trained from an early age to prey on other human beings, creates cadres of individuals who, as older children or young adults, can be mobilized to perpetrate violence in future wars. Frequent recourse to violence, moreover, renders ever more challenging the problem of establishing, maintaining and enforcing viable limits on access to forests and the valuable flora and fauna found there. Without such limits, it appears to be a matter of time until the desperate and the unscrupulous wipe out forests and associated renewable resources.

It is critical, in this context, to be very clear that ***Type I conflict timber problems*** are ***not the major cause of conflict and loss of human life***. The plundering of timber resources has, indeed, contributed to the havoc, but primarily in the context of ongoing civil and cross-border wars in the DRC, Liberia, Sierra Leone and, to a lesser extent in Guinea and perhaps latterly in the Ivory Coast. These wars result from four prime causes:

1. Efforts to suppress cross-border guerrilla activity aimed at toppling the governments in states targeted by the attacks;
2. Long-standing antagonisms between selected ethnic groups;
3. Failed or failing states with little capacity to control their own territory or what happens there; and
4. Opportunities to plunder conflict commodities.

Of these, timber is not the most prominent. Other commodities such as diamonds, gold, and coltan have all arguably played larger roles in motivating these wars because of their commodity characteristics (accessibility, weight-to-value ratios, lootability, concealability and fungibility).

To grasp the effect of these multifaceted calamities, it is important to calculate their impact on the failure of domestic economies in war-torn polities. Disruption of infrastructure facilities, closure of otherwise viable economic enterprises, the resulting loss of income and decline in public revenues all exert negative multiplier effects. In such conditions, it is simply not feasible to pursue many types of development activities. State reform under wartime conditions is problematic, if only because survival becomes everyone's overriding concern.

A somewhat anomalous finding of the African regional study merits attention. Civil wars can exert a temporary positive influence in the forestry sector by curtailing logging, and so reducing loss of biodiversity habitat and other forms of costly (and often irremediable) environmental destruction. But the findings are ambiguous. Much depends, in fact, on who controls the terrain and how they interpret their interests. If rebel groups opposing the country's government occupy forested areas, they may make it impossible for logging concerns to operate by attacking crews, expropriating equipment, etc. Such rebel groups may not, however, be able to move timber they might harvest to market because, as in the DRC, transporting logs by road is extremely costly and/or difficult. If, in addition, rivers that could be used to raft logs to market all flow into government-controlled territory, the combination of those factors may be enough to sharply slow or even completely stop logging operations. Such was the outcome in the DRC during the civil war. But just because rebel forces do not log does not mean that logging does not occur. Rebels are not the only "conflict entrepreneurs."

If the national government in power during a civil war (e.g., President Charles Taylor's regime in Liberia or President Joseph Kabila's in the DRC) has both the means to log and to move harvested timber to market, officials of that government may promote deforestation to obtain cash for arms. During peacetime, Taylor has repeatedly set up arrangements with unscrupulous logging companies to harvest trees in Liberia and in neighboring countries. These were subsequently bartered to the Chinese for light arms with which Taylor armed his soldiers. The logging concerns hired their own militias to discourage any interference with their activities. These did considerable damage to the environment in Liberia, both initially in terms of clearing forest from the land, and subsequently when farming communities established themselves on lands along roads opened by logging crews and cut much of the remaining forest to convert it to arable land. Furthermore, some of the cross-border wars that Taylor instigated from Liberia were designed to plunder resources in neighboring countries, including timber.

Kabila, when his regime was most threatened by invading forces, authorized logging companies in southwestern DRC to cut and export timber in state forests in exchange for 50% of the proceeds. Whether or not profits from logging actually went to the war effort, this was offered as the public justification for this activity by the regime.

The Democratic Republic of Congo (Box 11) exemplifies the *potential* role of wartime insecurity in buffering timber resources against exploitation. The DRC contains the last great reserve of forest resources on the African continent. Tree species found in the DRC are as valuable as those harvested elsewhere on the continent. The density and richness of the DRC's forests make them an automatic target of logging and wood-processing firms worldwide.

Box 11. DRC Case Study

Commercial logging began in the 1970s in the DRC (then known as Zaire). Sese Seko Mobutu (President of Zaire from 1962 to 1997) created what might euphemistically be termed a *difficult business climate* in the country. Corruption was elevated to a prime tool of governance, and legitimate enterprises were saddled with corruption-related transaction costs. In this context, logging firms did not destroy much of the DRC's abundant forest resources. Civil war broke out in late 1996 and disrupted business operations. By mid-1999, rebel forces had taken control of many of the DRC's richly forested areas. Some rebel units consisted of Mobutu's ex-allies who had allied with the Rwandan and Ugandan military forces that contributed to Mobutu's downfall in 1997. The new DRC government, under Laurent Kabila, broke ties with the Rwandan and Ugandan armies, creating an opportunity for his local opponents to ally themselves with the invaders.

With the major exceptions of eastern and northern DRC, the Kabila governments (the son, Joseph, replaced his father, assassinated in January 2001) retained control of the rest of the country. Neighboring countries helped the GOC (primarily Zimbabwe, Angola and Namibia). Sudan and Chad also entered the fray, but their forces focused more on plunder than on supporting one side or the other. Appendix 3 of the DRC country study in Volume III provides a timeline for the conflict, as well as, in a series of tables, the bewildering variety of protagonists involved in the DRC's civil war, and their interests and motivations for joining the conflict.

Rebel groups that controlled the most richly forested areas sought to tax forest concessionaires to raise money for their operations. Some also moved to cannibalize heavy equipment (graders, bulldozers, log skidders, etc.) for their own operations. Concession logging in northern and eastern DRC became unprofitable and impossible.

The **interesting question** is whether consolidation of peace in the DRC, a process that seems presently to be moving forward with strong support from neighboring states, donor and financing organizations, will unleash a wave of logging in the country. At the first sign of increasing security, domestic logging firms, desperate to earn money, repay loans, earn profits and possibly expand their operations, have moved with alacrity to restart their operations. They face many challenges, including depleted treasuries, replacing equipment lost or ruined during the civil war, dilapidated roads, and GOC officials strongly interested in business as usual and associated rent extraction possibilities. But the country's rivers continue to flow and, as security improves, timber felled in the interior can be rafted or transported by barge to markets in western DRC. The GOC also wants to restart the wood industry firms that will create jobs and provide both licit and illicit opportunities to mobilize revenues. Foreign buyers in Kinshasa are buying the first raw logs shipped down the Congo and Ubangi Rivers and beached at a port facility upstream from the capital.

Sustainable logging in the DRC depends on the GOC's ability to control access to forests, regulate harvesting, and provide for regeneration so that the country's stock of renewable timber will go on reconstituting itself, ensuring a reliable flow of value and economic benefits well into the future. A new forest code has been passed which restructures the forest concessioning process in an effort to allocate more of the benefits of logging to communities on whose lands forests are felled.

Here again, however, challenges are substantial. The DRC has perhaps the most corrupt business environment in the contemporary world (Volume III, Appendix 4, "Economic Governance"). The current government of national unity, a power-sharing arrangement designed to consolidate support for the GOC among rebel groups by allocating selected ministries to their representatives and integrating rebel soldiers into the national army, is untested. Corruption is rife in the DRC. Government control of financial transactions is practically nonexistent. Those who can acquire funds, licitly or illicitly, can move them out of the country without establishing a paper trail either to conserve or to launder them. The combination of rich forest resources and weak government controls will tempt the most unscrupulous logging firms to try their luck in the DRC. Given profits to be earned through logging, logging pressure seems set to intensify in the DRC.

3.4 Trends in Africa

Eleven main trends affecting conflict timber incidents in Africa, have been identified through this study:

1. Major Type I incidents currently occur only in Liberia and the DRC, a mere two countries out of Africa's total of 52 (or, in absolute numerical terms, in less than four percent of African polities). A brief glance at Figure 3.2 reveals why: *fewer and fewer countries in contemporary Africa retain enough trees to motivate Type I incidents*. Former major West African timber producers, e.g., Nigeria, Ghana and the Ivory Coast, have severely reduced their stocks over the course of the 20th century, clearing forest both to earn foreign exchange and to accommodate the spread of agriculture and tree crops (cocoa and coffee). Central African states such as Gabon, Cameroon and Congo/Brazzaville have likewise, in recent years, felled much of their standing timber (see below, DRC Country Study, Figure A.2.2, "African Timber Exports by Country Since 1988," in Appendix 2). Though a great deal of timber remains in Central Africa, those countries continue to authorize accelerated logging pressure on their natural forests. Existing and new forest plantations may, to some extent, pick up the slack but to *what* extent plantations can replace volumes of wood being harvested remains uncertain.
2. No African country currently has the level of *installed domestic wood processing capacity* found in, for example, Indonesia (10,000,000 m³ per year at a minimum). That said, international demand for West and Central African tropical hardwoods nearly equals the Indonesian domestic demand. In 2001, the eight major timber-producing countries in the Central and West Africa forest belt exported in excess of nine million m³ in roundwood equivalent, up from 5.6 million m³ roundwood equivalent exported in 1988 (see DRC Country Study, Appendix 2, Figure A-2.2). All those countries lie in the coastal moist tropical forest belt that formerly stretched 4,000 miles from southern Senegal to Gabon and then across to eastern DRC. Along the Atlantic coast, the forest belt ran inland an average 200 miles for some 2,800 miles). Much of this forest has now been cleared, although substantial reserves remain, particularly in the DRC.
3. Interestingly, *warfare conditions exerted demonstrably different effects in the two countries in the region currently most affected by warfare*, namely Liberia and the DRC. In the former, governance arrangements and the exigencies of warfare positively accelerated logging; in the latter, those same exigencies, played out with a different configuration of military forces across different (but still heavily forested) terrain *practically shut down logging* during the civil war in the last great reserve of tropical hardwood forests in Africa. This comparison implies that easy generalizations about conflict timber might be dangerously misleading. It also emphasizes the critical importance of case-by-case analyses in interpreting conflict timber incidents.
4. In *neither Liberia nor the DRC did timber figure as the prime conflict commodity*. Indeed, timber was only one among several "lootable" conflict commodities that belligerents used to finance their military activities. President Charles Taylor of Liberia, in supporting the destabilizing civil wars in neighboring states (Sierra Leone, Guinea and, most recently, the Ivory Coast), and in prosecuting several civil wars at home against Liberian insurgents, has relied at least as heavily on other conflict commodities, e.g., diamonds and gold, as on the timber resources available in Liberia and neighboring countries.
5. In countries where conflict fueled by timber currently occurs or might occur, governance can be fairly qualified as "of poor quality." Liberia and the DRC have respectively either recently suffered or are currently undergoing civil wars. These kinds of situations typically reveal weak, if not outright failed states (for fuller discussion, see Section 1.1.3, Box 1, "The DRC: A Failed State?"). Such situations are also typically chaotic, and offer selected actors in the military and government (to say nothing of well-connected private sector firms) numerous opportunities to plunder timber, among other

resources, as a means to finance their conflicts. The “commodity” characteristics of timber—great bulk, difficulties in transporting and concealing and, compared to gold, coltan and diamonds, relatively low weight-to-value ratio—discourage the use of trees as conflict commodities *in situations where more attractive alternatives exist*.

6. Of significance concerning the use of conflict commodities (conflict timber included) in financing warfare in Africa, is the existence of a “parallel world” of *unregulated financial institutions*. These institutions enable individuals who engage in looting conflict commodities to spirit the assets they acquire out of the country without leaving any paper trail. Those same financial arrangements enable looters to squirrel away ill-gotten gains in unidentifiable bank accounts and other safe havens abroad. They can also use those same arrangements to launder money from illicit or conflict commodity sources.
7. Many African countries, because of their very lack of forest resources, appear far more vulnerable in the future to conflicts emerging from competition over forest resources. These tend to be relatively localized events, however, and are not much reported. Furthermore, to date such incidents have not accumulated to the point where they pose insurmountable problems for either populations or states. When timber becomes scarce enough, people take measures to supply themselves with the fuel wood and construction poles necessary to sustain their existence, either through planting tree seeds or seedlings, or by protecting natural regeneration.
8. African hardwoods, taken together, are a commodity for which strong demand exists. An overview of international markets and trends in the demand for wood fiber is presented below in Appendix 2 (Section A-2.1, “Global Demand for Wood Fiber”) of the DRC country study. The international markets have been rising over the past decade, and indications are that the trend will continue over the foreseeable future, driven as it is both by population growth and increasing wealth.
9. A caveat, based on the example of *Arabica coffee*, should perhaps be noted here: if development specialists successfully recommend Arabica coffee production schemes in too many places, it is relatively easy to glut that market niche, leaving producers with little to show for their efforts. It will take careful planning and coordination to improve significantly the payoff for investment in regenerating tropical hardwood supplies in a number of countries in Africa and elsewhere in the world. Given the projected global demand, such investments should prove generally worthwhile, but overproduction, particularly from remaining natural forests, could cause the market, or some market segments, to weaken. That said, growing trees offer the advantage that they do not necessarily have to be harvested at a set date to protect the investment. Trees can usually be left standing “for several more years,” although past a certain point economic returns will decline because growth slows as trees age.
10. The DRC’s recently revised forest code takes the appropriate approach to the broad issues of forest resources, particularly timber. That code views timber resources as potentially “an expanding pie,” that can generate impressive crosscutting environmental, political, social, economic benefits and multiplier effects.
11. The key to controlling conflict timber incidents in Africa, particularly Type I incidents is, quite simply, better governance. Without better governance practices, and the ability to control and regulate demand for timber and so bring harvesting rates into line with production capacity, the outcome over the medium terms seems pretty clear, and pretty negative. Overcutting of forests seems likely in countries without strong, equitable governance. Such forests become *open-access goods*, subject to free-for-all harvesting regimes that will, predictably, kill the goose that now lays the golden egg. This

is particularly unfortunate because properly governed, well-managed forests could go on producing valuable timber for years and even centuries.

3.5 Comparison: Asia and Africa

3.5.1 Variations in Scope, Magnitude, and Trends of Conflict Timber in Asia and Africa

Conflict timber incidents are currently more prevalent in Asia than in Africa. But this statement requires explanation. In Africa, Type I incidents—conflict financed by timber—clearly occur in Charles Taylor’s Liberia and, to a lesser extent, in some of the other Mano River Union countries, particularly Sierra Leone. In the DRC, Type I incidents during the civil war have been documented, but Type II incidents potentially pose the greater threat if logging resumes in the country as seems likely with consolidation of the peace process and enhanced security in forested areas. Current accelerated logging throughout remaining forested areas in other West African states may, in time, give rise to Type II incidents, but available data does not suggest that this is an inevitable outcome.

In Asia, Indonesia is already witnessing a wave of Type II incidents that will probably intensify as the struggle to capture the remaining forests continues. If the major pulp and paper mills seek to acquire more lands in, e.g., villages in Sumatra to produce fast-growing pulp species, they may find themselves enmeshed in an ongoing series of conflicts with rural communities whose residents may prefer to convert cleared land to oil palm, from which they will likely derive higher financial rates of return than they could from fast-growing pulp species. Elsewhere in Asia—in particular, Vietnam and Afghanistan, Type II incidents again seem more prevalent. Even in Cambodia, the former classic Asian case of Type I conflict timber, the balance has shifted and Type II incidents now pose the greater threat.

Judged from afar, timber harvesting operations seem as active and intense in Africa as in Asia, with the notable exception of the DRC and with the important caveat that commodity characteristics of African timber—produced in mixed forests where sound economic reasons make high grading the preferred logging strategy. Whereas in Asia, at least in countries like Indonesia, the more uniform character of forests makes it financially feasible to harvest large volumes of timber.

The worldwide demand for tropical hardwoods places considerable, unrelenting pressure on remaining natural forests. What distinguishes Asia in general, and Indonesia in particular, from comparative African cases is the proximity and intensity of demand. The PRC, with its ongoing ban on domestic logging, represents a huge demand for timber immediately adjacent to the remaining forested regions of Asia. Yet the power and pervasiveness of Chinese demand for wood reaches around the world to Africa. Figure A-2.2 in the DRC’s country case study in Volume III indicates that China is the current biggest single country importer of timber from a broad range of countries in West and Central Africa. The combined demand of all European Union countries still exceeds Chinese demand, but the latter should not be underestimated.

Perhaps even more significant is the absence, in Africa, of major domestic sources of demand for timber that derive their power from global demand. The three gigantic pulp and paper mills operating in Indonesia together require 10 million m³ a year of wood to function economically. Large plywood-processing mills add to the demand. If natural forests in a country are treated as *wasting* rather than *renewable* resources, and logged at unsustainable rates, they may be able to maintain such operations for a few years. The cost, however, will be twofold: loss of environmental services and loss of future streams of value. Eradication of natural forests through unsustainable logging operations that utterly destroy them and, in the process, the environmental services they produce, may trigger serious Type II conflict timber incidents as stakeholders battle over remaining forests. Loss of very substantial future flows of value from high-value tropical hardwoods that domestic wood-processing firms can transform into even higher priced

products for export undermines capacity for self-sustaining growth in the domestic economy. Global demand for tropical hardwoods has increased, and will likely continue on an upward trend into the future, as more and more households worldwide attain middle-class status and disposable income levels enable them to acquire fine wood furniture, interior trims, etc. If countries can conserve existing forest stocks, they can profit handsomely from these trends. But that supposes success in reforming governance systems (rule of law, control over financial transactions, meaningful citizen recourses, etc.) and weak, dependent economies.

3.5.2 Shared Characteristics Underlying Conflict Timber in Asia and Africa

Based upon the regional analyses of conflict timber in Asia and Africa, four shared characteristics seem to appear. A fifth point, the degree to which greed and grievance respectively generate Type I and Type II conflict timber activities, is also discussed below.

1. **Strong links between poor governance and timber-based conflict.** Conflict timber incidents almost always occur in states characterized by poor governance. In many cases, these same polities can fairly be characterized as failed states unable, in the territory they nominally control, to make and systematically apply rules that citizens will accept as legitimate and binding. Conflict timber incidents arise because the allocation of authority is unclear; different (competing) government units at different levels within the polity assert authority to allocate logging concessions, but the legal system is unable to adjudicate claims successfully. Ambiguous property rights result, tempting more powerful actors to take what they want by force. When—as is usually the case—such preemptive strikes are conducted without regard for the sustainability of forests (the underlying renewable resource, and fail to take account of the interests of many stakeholders, they set the stage for later Type 2 conflict timber incidents. Indonesia represents a perhaps relatively benign form of poor governance as far as forest resources are concerned. When devolution was introduced at the end of the Suharto regime, the policy, particularly its specific implications in terms of authority over forest resources, was not properly explained. In consequence, various actors in central and local governments (i.e., regional and district governments) assert authority to allocate logging concessions. The non-autonomous, often corrupt legal system has not managed to establish its authority to sort out conflicting claims, so they persist. Each claimant recognizes that others might seek to snatch “his” timber. Most thus consider that logging is best done “rapidly” to reduce the likelihood of losses to other claimants.

Systems of poor governance frequently involve high levels of corruption, making it even more difficult to establish binding rules governing access to forest resources and regulating harvesting of those resources. These kinds of classic open access property circumstances create very strong incentives for all “harvesting” stakeholders to engage in a free-for-all, with each trying his level best to fell and appropriate as many trees as possible before other competitors succeed with the same strategy. Stakeholders who want to preserve forests for the environmental services or other values they produce typically have little capacity to resist those appropriating their resources. Reinforcing this dynamic in countries where poor governance is the norm are weak controls over financial transactions. This situation encourages unscrupulous operators to seek logging concessions and access to timber resources by any available means because profits can be easily concealed and moved, both within and outside of the country.

When governance is poor and the state is unable to suppress insurgencies, government opponents raise claims to parts of the national territory. This may, as in the DRC during the civil war, discourage logging by heightening insecurity in forested areas. But if, as in Burma, such groups can set up arrangements to enable logging firms to harvest timber, they can profit from those operations and will usually collaborate in them, often condoning non-sustainable harvesting methods. While the Burmese

junta has strengthened its grip on power in the last few years and achieved cease fire agreements with a number of the ethnic insurgent groups in that country, the general point still holds. Enabling conditions for Type I conflict timber incidents clearly include poor governance.

2. **Domestic or foreign governmental forces are almost always complicit in conflict timber activities.** Governments, in the form of the military and other security forces, are almost always involved in the exploitation of timber as a conflict commodity. In Eastern DRC, local self-defense militias (known as *Mayi-Mayi*) sometimes managed to impede actions by GOC or outside forces, e.g., the armies of Rwanda and Uganda, but they control neither enough capital equipment to carry out extensive logging, nor economic pathways to markets where timber can be converted into cash. The difficulty of exploiting timber, particularly the need to move a bulky commodity to market or process it into smaller, higher value pieces prior to moving it to market requires skills and capital equipment. This means that state-based organizations like military units and government-backed logging companies are more likely to engage in conflict timber operations than are rebel groups unless the latter can contract with logging firms that command both the necessary equipment and skills, and have access to markets. The Ugandan and Rwandan armies that invaded the DRC sent significant amounts of processed lumber to their home countries and also shipped large numbers of logs out of the country. As those armies controlled the road network they were able to ensure both relatively efficient transport operations and low transactions costs because they had the physical capacity to prevent other groups from collecting tolls, etc.

In Indonesia, the same story applies. Military officials participate in logging companies and sometimes contract with firms to conduct their own logging operations. They have the physical means to ensure that felled timber makes it to market, whether domestically or abroad. If they collaborate with logging companies, military officers can relieve those companies of customs duties on imported logging equipment needed for mechanized harvesting and so lower the cost of logging operations.

3. **Loose financial oversight generates incentives for powerful individual actors (military, police, politicians) to engage in conflict timber activities.** Lax controls on financial operations serve as an incentive for powerful individuals to engage in conflict timber activities. Individuals in that class enjoy quasi-guaranteed access to channels for moving money out of their countries, e.g., unregulated “private” banks, money transfer shops (typically open to anyone), bulk cash transfers that can be moved across very porous borders, etc. They also have the knowledge to identify safe havens in which to bank both illicit and licit proceeds of timber operations. When such officials play a lead role in these kinds of operations it is not difficult to divert some of the proceeds to personal accounts. Being able to profit personally from conflict timber operations serves as a strong incentive to encourage some actors to participate. Such situations exist in Indonesia, where military officers participate in logging operations, and in the DRC, where selected officers of the invading Rwandan and Ugandan armies diverted timber shipments for their own accounts. In Liberia, the presidency operates with almost no checks and balances and the financial and banking system is, for all practical purposes, unregulated. It would be extraordinary if President Charles Taylor had not availed himself of the opportunity to bank proceeds from some sales of illicit timber (as well as from diamonds and gold plundered in neighboring Sierra Leone and Guinea).
4. **Ambiguous property rights generate struggles over timber.** When “ownership” claims are uncertain as, for example, in Indonesia where multiple levels and units of government issue competing logging concessions, and when rule of law institutions—principally the judiciary—are fragile and exposed to temptation through the day to day operations of a corrupt system. In this system powerful actors act in their own best interest, taking advantage of the situation, rather than waiting for the uncertain outcome of a problematic judicial process. This seems to be frequently the case in Indonesia, where, e.g., pulp and paper mills, logging concessionaires, and parastatal forest

plantation employees all engage police and military units to “provide security” by intimidating potential competitors, interlopers and protestors. If rural communities could establish legally defensible claims to forests on their lands, this could obviously function as a strong deterrent to logging that communities refused to authorize. But if district and national government agencies can all issue licenses to harvest timber on community lands without any requirement to consult communities and without any community capacity to veto such activities (except through long-running demonstrations and protests of the sort that closed a pulp and paper mill near Porsea, North Sumatra, Indonesia for more than a year), then the trees are, essentially, doomed and villagers exposed to the consequences—serious loss of productivity from their production systems.

5. **The degree to which greed and grievance respectively generate Type 1 and Type 2 conflict timber activities requires more examination.** No clear pattern emerges from the cases studied that would highlight greed as the dominant cause of Type 1 conflict timber incidents and grievance as the fundamental motivator for Type 2 incidents. On that score, the record is decidedly mixed. The following brief notes on country situations, in which “1” refers to incidents of timber for arms and “2” refers to incidents of conflict among competing claimants for forest resources, support this contention:

The cases examined suggest, however, that a third causal factor should be introduced as an incentive for conflict timber incidents of both types. That factor might be defined as “*security concerns*.” Asian examples where security concerns seem to dominate include Afghanistan, Burma and Cambodia. In each of these country cases “security concerns” might be classified as “grievances.” In fact, however, evidence suggests that worries about sheer survival trumped either greed or grievance in these specific cases. The motivator for Pashtun warlords in eastern Afghanistan, for hills tribes and junta members in Burma, and for Khmer Rouge remnant army factions in Cambodia during the last phases of the Khmer Rouge era was really sheer survival.

Pashtun culture has been organized (presumably since before the time of Alexander the Great) on the basis of internecine warfare (Bailey). The warlord who lacks the means to arm his followers must expect to be attacked and overwhelmed by a rival who will replace him.

In Burma, the Burman inhabitants of the country’s central plains and the “hill tribes” competed with each other over power for hundreds of years before installation of the British raj during the 19th century. The British pitted the two groups against each other in a divide and conquer strategy that functioned admirably from the imperial perspective. Hill tribesmen recruited as security forces seemingly enjoyed policing the raj’s Burman subjects. These long-standing antagonisms between the two broad groups would suggest to members of both that failure to maintain a high level of military preparedness could lead quickly to subjugation by the other group. Thus having a reliable source of arms—in the case of the hill tribes—or being able to track insurgent groups into their hill forest redoubts would constitute high level security concerns for both groups.

Finally, in post Pol Pot Cambodia, the factions into which the Khmer Rouge army degenerated needed to control timber and precious gem resources in the country in order to arm themselves against attack from competing factions and from the Vietnam-backed central regime.

In Africa, survival concerns appear to have been critical factors in motivating both the Rwandan and Ugandan regimes and military to attack the DRC. Both Rwanda and Uganda were under attack from guerrilla groups sheltering in eastern DRC that former President Mobutu could not or would not control and interdict. That said, the public record—established in large part by two UN expert panels—makes it quite plain that officers in both the Rwandan and Ugandan armies, as well as the political leaders who dispatched them to fight in the DRC, did in fact operate as though they were

motivated in part by greed. Once installed in eastern and northern DRC, the Ugandan and Rwandan armies plundered a wide variety of resources—gold, diamonds, coltan, coffee beans, cattle, cars, cash, valuable flora and fauna, as well as some round wood and processed lumber. One would have to be exceptionally naïve to believe that some of the profits from some of those looted commodities did not find their way into the personal accounts of individual officers (and appointed and elected politicians, entrepreneurs involved at various points in the process, etc.), even if substantial amounts of money may have gone to finance the war effort in the two invading countries.

4.0 KEY FINDINGS

The following findings are based on a review and analysis of the regional study materials (including the country conflict timber profiles and the in-depth country case studies) from Asia and Africa. For greater background the reader is encouraged to consult Volumes I and II of the Conflict Timber Final Report.

1. **Liberia constitutes a unique case of conflict timber.** While Liberia exemplifies Type 1 conflict timber, it is also the most virulent example of Type 1 conflict timber. Liberian President Charles Taylor has used timber, in addition to other resources available to the Liberian presidency, to finance military interventions domestically, as well as in three neighboring countries, i.e., Sierra Leone, Guinea and, most recently, the Ivory Coast.

The scale and blatancy of Taylor's Type 1 conflict timber strategy is important, but it appears to be a decided "outlier" in comparison to incidents of Type 1 conflict timber elsewhere. Taylor's "success" with this strategy—even though his regime presently faces powerful resistance—depends on the governance structure of Liberia's highly autocratic regime, and the extent to which the president can dominate the polity, control opposition groups, and acquire and allocate resources as he sees fit. In other countries where power is less concentrated, Taylor's strategy might prove much more problematic. (As of 26 June 2003, Taylor's regime was under heavy attack by rebel forces that have moved to the edges of Monrovia, the country's capital; the outcome remains uncertain.)

2. **Timber is not a preferred conflict commodity.** Timber does not rank high on the list of lootable commodities. Commodity characteristics—accessibility, lootability, weight-to-value ratio, concealability, transportability, importance to people's livelihoods, weight-to-value ratio, fungibility—all shape the value of particular goods as conflict commodities. *Timber's commodity characteristics discourage its use as a conflict commodity in situations where less bulky, more easily lootable, higher weight-to-value options exist.* On the other hand, those organized to deal in conflict commodities in an area—as recent experience in Liberia, the DRC and Burma demonstrate—will not reject valuable timber if they have the means to move it to market.

It is important to recognize that the characteristics of some conflict commodities can vary, depending on where they are found and how easy or difficult it is to recover, transport and market them in a given politico-military context. By comparison with more easily lootable commodities, oil, for instance, requires huge amounts of capital and knowledge to identify and recover from subterranean reserves, transport it to refineries and transform the crude into useful commodities. These commodity characteristics of oil are relatively constant and fixed. But capacity to exploit oil as a conflict commodity depends as well on assured control of territory so that entrepreneurs can finance, build and operate oil rigs, transportation facilities and the like, and recover their sunk costs. For this reason oil has little attraction for so-called conflict entrepreneurs seeking to replace existing governments unless they can extort payments from petroleum operations already under way. On the other hand, governments that control territory can extract considerable wealth from oil reserves by contracting out exploitation to international oil companies.

The same commodity will be more or less accessible depending on its location. Diamonds in deep deposits may pose nearly as many access difficulties as oil. Diamonds found in alluvial deposits, by contrast, may be easily accessible for individuals using low capital, artisan techniques. The same observations hold for deep vein gold deposits versus gold recovered by panning in stream and river beds. Diamonds and gold in South Africa are found far underground; in eastern DRC, artisans can recover significant amounts of gold and diamonds from alluvial deposits. For groups that can control territory in the DRC, the two commodities are more accessible and more lootable in parts of that country than in South Africa. Such commodities, with high weight-to-value ratios, are easy to conceal

and to transport, and are as nearly fungible as wood in terms of the potential range of end uses, making them extremely attractive as conflict commodities.

On the other hand, commodity characteristics of accessibility, lootability, high weight-to-value ratio and concealability will be of heightened significance to groups that cannot exert control over an area. When an army, whether state-based, rebel or invading, controls territory, it will not much affect the value of gold and diamonds found in the area. But military control *can* modify the prospective value of standing timber because timber logged with army concurrence does not have to be concealed *if* it can be moved to market along routes controlled by the army, the army has equipment adapted to moving heavy weights, etc.

3. **Treating timber as a renewable resource, as opposed to a wasting resource, is a necessary precondition for sustainable forest management—and for limiting the incidents of conflict timber.** Timber differs from many other conflict commodities because the latter, gold and diamonds, for example, are typically wasting resources (available in fixed amounts and, once exploited, gone forever). Most forest resources, by contrast are potentially renewable resources. Trees, if harvested in accord with norms of sustainable logging, can reproduce themselves indefinitely either through natural regeneration or replanting. They can provide both present and repeated future streams of income, assuming that those harvesting trees exercise reasonable stewardship as they harvest and also promote regrowth of the resource. But this renewable character of trees has to be seen in the context of the greater risks involved in destroying forests, which produce important environmental services for downstream areas, particularly water control in areas of high precipitation (e.g., most parts of Indonesia and the DRC). If forest destruction impairs provision of those services, it may undercut future livelihood possibilities. Reduced livelihood possibilities can generate Type 2 conflict timber incidents as stakeholders begin to compete for control of remaining forest resources. Situations in both Indonesia and the Philippines illustrate this point. In Indonesia, the pulp and paper mill companies as well as other timber concessionaires have destroyed forests also claimed by many rural communities. Residents of the latter have organized to oppose these activities. In the Philippines, extensive logging throughout the 20th century denuded many upland areas. Immigrants who moved into those areas to start farms have, on occasion, gotten into conflicts with original settlers over control of trees. In Burma, while both the government junta and ethnic insurgent groups used trees to finance the conflicts, the ethnic groups also sought to retain control over forests upon which their livelihoods were in part based. In Vietnam, finally, government policy to secure claims to areas inhabited by ethnic *montagnard* groups suspected of seeking independence by settling ethnic Vietnamese in these areas has produced some Type 2 conflicts between the two groups. In Africa, in general, Type 2 conflicts have not occurred, to date, to any great extent although they do exist at relatively low levels in timber-short parts of the continent, e.g., between pastoralists and farmers on the southern edge of the Saharan desert. Farmers want certain trees on their fields because they enhance soil fertility. Those same trees are prized by pastoralists for their green leaves during the dry season. If farmers find herders lopping leafy branches from live trees, Type 2 conflicts can erupt.
4. **Good governance is a condition of sustainable forestry.** One of the key “*rediscoveries*” of this study is the *renewable* character of forests. The current situation concerning tropical forests, is one in which most actors see no meaningful possibility of controlling access to forests and regulating harvesting. They have no faith in the rule of law or the durability of states’ governance capacity. This shortens their time horizon for decision making and leads them to treat harvesting trees as a *one shot game*. Sustainable forestry, by contrast, is a *game of multiple plays* over the long term. It is critical to convince country officials that sustained-yield forestry allows for an ongoing flow of benefits that may very well increase in value over time as demand for tropical hardwood strengthens and will, in addition, yield over the long haul a range of other beneficial effects, i.e.,

4.0 Key Findings

- Environmental conservation,
 - Biodiversity preservation,
 - Forest-based environmental services,
 - Economic support and motivation for civil society organizations,
 - Opportunities to encourage more popular participation in forest governance and management, and
 - A buoyant wood sector industry capable of making a continuing contribution to the country's economy, to public revenues, etc.
5. **Incidents of conflict timber are almost always tied to state security forces.** An uneasy connection often arises between conflict timber and security forces. Where land tenure and tree tenure claims to logging concessions are unclear, and no broadly accepted framework—such as a functioning judicial system—exists to resolve conflicts, claimants have strong incentives to hire security forces to prevent others from harvesting “their” trees. Indonesia offers perhaps the most flagrant illustrations of this problem: overly rapid implementation of a poorly explained decentralization policy has unleashed a destructive approach to forest resource allocation and use. Concessions, by their nature, tend to be sizeable, which implies that claimants require sizeable forces to protect them. As both armed military and police units hire themselves out to protect logging concessions, the risk of deadly confrontation is substantial. Furthermore, as some local stakeholders in forests operate in terms of *adat* or customary law rather than formal government law, it has proven difficult to resolve tree and land tenure disputes. Some of these date back to the colonial era. Gangs of local loggers, often working for local wood-processing firms, harvest trees in teak plantations that were planted under the Dutch on the asserted grounds that the land on which the trees were planted belongs to their community. In these situations, security forces have used deadly force to discourage illicit logging and loggers have on occasion retaliated against individual members of these security forces.
6. **Civil conflict can play an ambiguous role in curtailing logging.** Civil conflict can slow logging operations *if* it increases insecurity for logging companies in their concessions and *if* it makes it difficult or impossible for groups engaging in logging to move timber to market. Thus the role of conflict in this regard is highly *situational*. Recent events in the DRC illustrate the problem. Anti-government rebels controlled some of the country's most richly forested areas during the civil war, but the government controlled areas where markets were located. The two forces thus *checkmated* each other: government-approved firms could not log concessions in rebel territory and rebel loggers could not easily move logs to market. By contrast, in eastern DRC areas controlled by the invading armies of Uganda and Rwanda, harvesting continued apace and the invading army shipped logs out to their home countries on a road network that was still passable. The GOC controlled western Congo, and authorized logging in state forests there to obtain money for the war effort. GOC-approved logging firms cut and moved wood to the ocean ports of Matadi and Boma on the lower Congo River, furthering deforestation in Bas Congo Province. In Burma, both the government and insurgent groups allowed Thai firms to log in forests on Burma's eastern border. Despite intermittent clashes all along the Burma/Thai border, the Thai firms managed to extract a good deal of timber which they then processed in Thailand into higher value wood products.
7. **Uncertain land and tree tenure claims promote conflict timber incidents.** Ambiguous land tenure claims in forested areas create potential for conflict timber incidents of both types. If governments prove unable or unwilling to adjudicate conflicting claims—often because the rule of law is problematic—a test of strength becomes the only way to resolve competing claims. Careful devolution of authority to govern and manage renewable natural resources may well improve the situation in local settings, but hurried devolution can create doubt about who is in charge in the sector. This invites the unscrupulous and powerful to make claims and to act upon them. As land tends to be highly prized in most rural societies, failure to clarify authority over land and forests, to settle

outstanding claims and lay out a means to resolve future disputes creates opportunities for conflict timber incidents.

In Indonesia, the problem of ambiguous forest concession tenure looms large. As noted, competing units of government at the district, regional and national levels all issue logging concession licenses without coordinating their decisions with those of other units. This often ends with overlapping claims and clashes between claimants. Many of the latter hire moonlighting police or military to protect their claims, and these private security forces can enter into confrontations with each other.

8. **Inadequate control of financial transactions encourages conflict timber activities.** One of the greatest incentives to conflict timber incidents of both types lies in lax controls over financial transactions. If those involved in conflict timber activities know that they can move profits out of the country and bank them in untraceable accounts elsewhere, that acts as a strong incentive to engage in conflict timber activities. Appendix 5 in the DRC country case study in Volume III highlights measures recommended to combat money laundering and other forms of uncontrolled financial transactions. These all clearly link to governance arrangements. Controlling financial transactions requires that government officials insist that financial institutions of all sorts, from fully registered banks to money transfer shops, comply with requirements to identify beneficial owners of accounts and to ensure minimum tracking of financial transactions. But realistically, one must conclude that government officials are often among those who have the most to gain, personally, from unmonitored financial transactions. So political *will* to address the problem of uncontrolled financial transactions may be conspicuous by its absence. Those who have the authority to create enforceable legal incentives for different kinds of behavior apparently have few, weak incentives to do so. Under such circumstances, passing legislation that proves to be essentially unenforceable does nothing to encourage more appropriate behavior.

In this regard it is important to distinguish two types of situations; those involving:

- Logging operations intent on profiteering in unstable situations, and
- Logging operations that seek to develop operations, e.g., pulp and paper mills, in stable situations where open conflict is not currently a problem.

In situations of the latter type it is important to inform investors of potential risks and uncertainties in those environments so that they refuse to finance creation of such enterprises. The Indonesian pulp and paper mills exemplify this situation: when they were first constructed, human resource conflicts were not a pressing issue. But their demand for wood was so voracious that tree plantations could not meet it. To meet their need for wood fiber, the mills began to exploit natural forests; they have, at present, nearly deforested Sumatra. Forests in other parts of the country have likewise suffered from ill-considered logging schemes.

9. **Both functional and equitable rule of law systems are key to discouraging conflict timber incidents.** Without a functioning rule of law system it becomes very difficult to adjudicate competing claims to forests. This creates a compelling set of incentives for concessionaires or unscrupulous timber entrepreneurs to cut as much timber as fast as they can in order to prevent others from “getting there first.” Absence of rule of law also creates *powerful disincentives to sustainable forestry* over the long haul—who wants to invest money and effort in regenerating a parcel of logged-over forest, only to find that another logging concern has established a claim, however spurious, and logged the parcel? If court decisions are available to the highest bidder, the economically powerful will almost certainly win such contests, and therefore everyone has strong incentives never to let slip an opportunity to capture value in the short term and add to one’s war chest, especially if that means that competitors will not have access to the same opportunities.

In many developing countries *inequity, rather than equity*, characterizes the development, and/or the application of laws and policies. Laws, or the application thereof, that are considered inequitable often contribute to conflict over forest resources. If indigenous communities, for example, those in Burma, Indonesia, the Philippines or Vietnam believe that they have legitimate claims to forest land (through long occupation and usage, etc.), they may feel that central or local government decisions allocating those lands to logging concessionaires without regard to their claims are highly illegitimate because they fail to take any account of the equities in such situations, and make no effort to accommodate the interests of indigenous communities. In these cases, competition with outside forces may lead local user groups to engage in conflict to protect “their” resources.

10. **The resource demands of pulp, paper, plywood industries foster conflict timber incidents.** From an environmental standpoint, degradation caused by pulp and paper mills links directly to their insatiable demand for wood fiber, which often brings them into conflict with other forest stakeholders. In this regard, as a country with sizeable tropical timber resources recovers from conflict, it appears critically important to discourage national government officials and others from authorizing and financing pulp and paper mills. Large-scale plywood mills should perhaps face the same prohibition and for the same reason: their demand for wood cannot normally be accommodated without logging off and potentially destroying natural forests.

Under these circumstances, from an economic recovery perspective, it would appear more rational to encourage development of multiple, smaller scale domestic wood processing firms, provided that their collective demand does not add up to that of a large pulp and paper industry. Foreign exchange earnings from processed wood, much less furniture, far exceed those to be gained through export of raw logs or paper. Domestic wood processing companies, by creating jobs, can exert a positive multiplier effect on the local economy, and produce continuing flows of revenue for years into the future. The firm and rising demand for tropical hardwoods would appear to make this a promising strategy to promote economic development in such countries. This strategy is, however, by no means foolproof and should be carefully scrutinized in each case to identify weaknesses.

It may also prove an interesting strategy to strengthen civil society and to build up a group of potentially powerful advocates for sustainable forestry practices in the country. As both entrepreneurs and employees realize their shared interest in using forests as renewable resources to protect their economic opportunities and livelihoods, those groups may support demands for greater transparency and accountability in the forest industry sector. In particular, they might insist on fair allocation of logging concessions, and lobby for laws designed to support companies committed to sustainable logging and forestry, rather than unscrupulous operators. While such gains would take time to institute and consolidate, they would create incentives for an important class of potentially powerful actors to oppose all-out exploitation of remaining tropical forest resources.

11. **In post-conflict situations: the need to restart the economy may threaten forests and livelihoods, and promote conflict.** Immediate post-conflict situations in forest-rich countries would appear to be fraught with peril. On one hand, there is an urgent need to restart the economy; if increased security improves the investment climate, this can easily lead to increased extraction. Yet governance arrangements remain quite weak, particularly concerning renewable natural resources. Under such circumstances the challenge becomes one of ensuring that forest resources are not allocated to co-opt or pay off those who participated in the violence. (The junta government in Burma has, for example, used forests rich in valuable tropical hardwoods as bargaining chips in peace negotiations. Insurgent groups that sign cease-fire agreements often obtain control over forests as an incentive to sign.)

Donor and financing agencies that can exert influence over national economic decisions during such periods need to increase monitoring and vigilance—at the very least to discourage countries from making commitments to authorize plywood and pulp and paper mills whose demand for feeder stocks can decimate national forestry resources. The comparison of Indonesia and the DRC makes the point. Pulp and paper mills have contributed materially to the ongoing deforestation in Indonesia (although it must be noted that other powerful factors were also involved). Logging in the DRC over much of the past decade has been impeded by insecure conditions in forested areas. If the ongoing peace process in that country bears fruit, DRC officials might be tempted to authorize large mill operations as a way to restart the war-torn economy (and also to create opportunities, within the context of a very corrupt governance system and economy, to extract rents from the process). Donor and financing agencies committed to supporting sustainable recovery in the DRC should consider carefully the disadvantages as well as the advantages of creating a huge demand for timber in the country.

12. **International sanction regimes: a way to discourage unsustainable forestry.** International arrangements to sanction countries that condone unsustainable forestry and companies that engage in it could make a contribution to reducing conflict timber incidents of both types. Sanction regimes for timber might offer some leverage by which donor and financing agencies could modify the incentives within the country to discourage activities that are likely to generate incidents of conflict timber.
13. **Popular participation: a key to controlling conflict timber and encouraging sustainable forestry.** Rural communities dependent on forests for environmental services and for income can play a key role in sustainable forestry and in discouraging conflict timber incidents. As they live in close proximity to forests, they will likely have high-quality information about activities occurring in those forests.

5.0 RECOMMENDED PROGRAMMATIC RESPONSES FOR USAID

The results of this study indicate that both variants of conflict timber (conflict financed by timber and conflict among stakeholders over forests) are significant phenomena. In both cases, conflict timber is undeniably a *crosscutting* problem. Efforts to tackle conflict timber and associated economic, social, environmental and financial issues inevitably will require solutions that address the major underlying cause of conflict timber—poor governance.

Incidents of conflict timber **almost always** occur where there is:

- The complicit involvement of government (e.g., military, security forces, the forest service, etc.);
- Little, if any, capacity for financial oversight;
- Uncertain land/resource tenure; and
- Little hope for just recourse in the application of the legal system.

The specific commodity, market and governance characteristics giving rise to sustaining an incident of conflict timber differ from one location to another. As a result, there is no programmatic “silver bullet” capable of successfully addressing all incidents of conflict timber. Rather, the findings of this study show that to successfully address the issue of conflict timber, well-reasoned programmatic responses need to be developed on a case-by-case basis.

The following are general, larger-level recommendations that USAID could support to decrease the incidence, longevity or severity of conflict timber incidents. Programmatic responses to address a specific conflict timber incident would require additional study and analysis. This being said, the Team feels that the following six recommendations could frame an integrated approach for addressing the problem of conflict timber.

1. **Promote activities that raise host country governments’ awareness of the direct link between sustainable forest (or more broadly, environmental) management and the long-term potential for economic growth.** The link between environmental management and economic growth has been well established over the past 20 years. A resource (whether forest, water or range), if managed sustainably, can yield economic benefits now, as well as in the future. However, short-term economic strategies have defined forest exploitation in much of the developing world, encouraging governments to exploit forests, a renewable resource, in unsustainable ways. These economic strategies clearly compromise the future productive capacity and economic potential of the resource base, and in many cases increase competition and conflict over forest resources. Efforts to educate host country governments on the long-term economic potential of their forest resources, and to promote longer-term economic strategies that realize both the present and the future economic potential of the resource will be a vital step in stemming the incidence of conflict timber—especially Type 2 incidents.
2. **Promote the application of accepted financial controls to discourage predatory, unscrupulous entrepreneurship.** USAID, and other US government (USG) agencies should consider promoting donor coordination to ensure the introduction and application of adequate controls over financial transactions conducted by public and private banks, money transfer shops and all other in-country agencies that accept deposits and move money domestically and internationally. This is a basic necessity to counter money-laundering operations and seems justified in an era of widespread concern about terrorism. Without these controls in place, those who profit from conflict timber activities (or those involving other conflict commodities) know that they can protect their financial gains from

public scrutiny with relative ease. As long as this is the case, it will be difficult to diminish the interest of state, rebel and unscrupulous private sector operators in such strategies.

3. **Use sustainable forestry, and more generally sustainable natural resources management, as a crosscutting approach to improving democracy and governance (D/G).** Over the past ten years the links between natural resources management and governance have been well established. Given the strong linkages between people's livelihoods and sustainable forest management, there is a clear opportunity to promote broader D/G goals through programs and activities that focus directly on improving the management of the economic/environmental resource base. Especially within the context of decentralization, promoting cooperation between rural resource users, local government and civil society can make significant gains in addressing incidents of conflict timber.
4. **Foster the evolution of civil society groups—both the private sector and NGOs—committed to sustainable forestry.** The unsettling role played by unscrupulous private sector interests in many conflict timber incidents is well documented in this study. This being said, there are private sector entities who operate using sound economic, social and environmental practices. Where potential exists, it would be advisable for missions to promote collaboration with these “ethical” private sector interests as a means to promote the development of a sustainable forestry sector. Complementarily, it is important to support NGOs that advocate for social, environmental and economic justice—often on behalf of voiceless or politically alienated populations. Together with community-based organizations interested in sustainable forestry, these stakeholders have the best chance of serving as in-country advocates for sustainable forestry.
5. **DRC: Promote donor/financing agency vigilance to prevent the establishment of large, domestic pulp and paper mills and plywood factories whose demand for feeder stocks would be unsustainable.** If peace is consolidated in the DRC, increasingly secure conditions will encourage “no holds barred” exploitation of the country's rich forest resources. It will be a major challenge to control timber exploitation for export. If the DRC authorizes creation of a major source of domestic demand, such as a pulp and paper mill, it will very likely overwhelm efforts to promote sustainable forestry in the country. USAID should collaborate closely with other donor and financing agencies to discourage such a development.
6. **Indonesia: Support the financing of military and police forces through formal budgetary allocations, to discourage self-financing requirements—which directly and indirectly result in economic, environmental and human rights abuses.** It would be highly appropriate to continue with efforts to relieve the Indonesia military and police forces of the need to raise two-thirds of their operating budget from their own economic enterprises. This arrangement creates a standing incentive for police officers and soldiers to abuse their powers in efforts to mobilize funds. USAID could explore with other donor and financing agencies the possibility of supporting gradual down-sizing of the military, in particular, to relieve pressure on the national budget and increase the possibility of future military funding from entirely formal, open and publicly decided sources via the national budget.