Forests and war, forests and peace

Many violent conflicts occur in forested regions. This chapter outlines the reasons, and proposes some solutions. It notes the general characteristics of recent armed disputes, examines the links to and impact on forests, explores issues related to post-conflict situations and presents a strategy for action.

Although wars have been and are being fought all over the world, the focus in this chapter is on major clashes that have taken place in Africa, Latin America and South and Southeast Asia. Forest-related conflicts involving less violence exist in almost all countries. However, their characteristics and implications are somewhat different.

TRAGEDY OF VIOLENT CONFLICT

In 2000, 17 countries experienced armed conflict – defined as ongoing violence between two or more armies in which more than a thousand people die in combat – and another 12 countries were in post-conflict situations (Collier and Hoeffler, 2002). Although most of this unrest was caused by civil war, many of these wars affected neighbouring states as well. In addition, numerous countries experienced other forms of violence such as banditry, killings linked to land disputes and hostilities with fewer than a thousand fatalities.

The number of armed conflicts around the world rose steadily between 1965 and 1990, but has declined slightly since then. However, recent conflicts seem to last longer than in the past (Collier and Hoeffler, 2002).

Violent conflicts create huge economic and social costs, as well as a significant impact on the environment. At the end of a civil war, which on average lasts seven years, a country can expect its per capita income to be 15 percent lower and to have 30 percent more people living in poverty (Collier *et al.*, 2003). In the past decade, millions of people, mostly civilians, have died in conflicts, and many more have been maimed or have had to flee. In 2001, the Office of the United Nations High Commissioner for Refugees (UNHCR) assisted 12 million refugees and 5.3 million internally displaced people (UNHCR, 2002). Indirect effects of conflict include a higher incidence of adult and child mortality, malaria and HIV/AIDS. In addition, most opium and cocaine production occurs in countries in conflict or post-conflict situations (Collier *et. al.*, 2003).

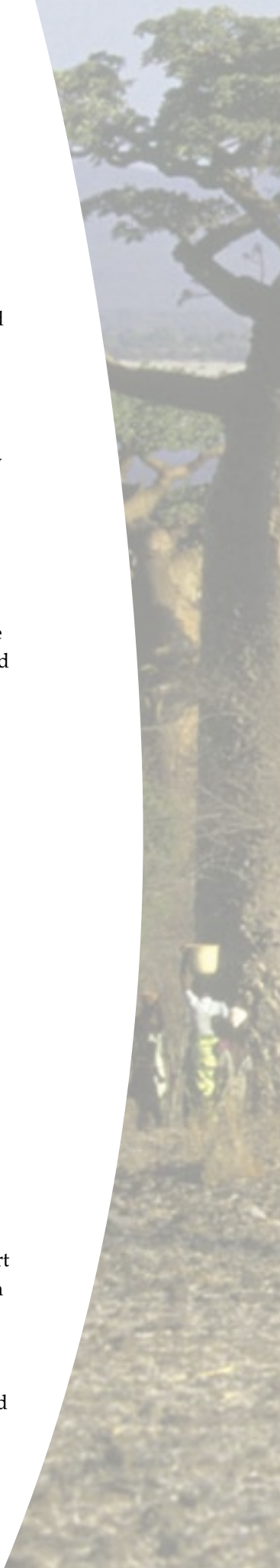
GEOGRAPHY OF VIOLENT CONFLICT

While a complex set of political, ethnic, religious, ideological and economic factors accounts for why specific countries experience armed conflict, some are more prone to violence than others. Those most at risk have low per capita incomes and stagnant economies and export mostly primary commodities. About 50 countries, with a combined population of more than one billion, share all three characteristics. Countries where one ethnic group dominates a number of minorities are prime candidates for military hostilities, as are those that have suffered previous conflicts (Collier *et al.*, 2003).

Although research on the geography of armed conflicts within national borders has not been widely conducted, studies (Goodhand, 2003; Le Billon, 2001; Starr, 2002) suggest that violent conflict is more frequent in areas that:

- are remote and inaccessible;
- have valuable natural resources in areas where property rights are uncertain or disputed;
- have a high proportion of poor households;
- have been poorly integrated into national democratic institutions;
- receive few public services;
- have several ethnic groups and religions.

Areas within countries that are most likely to experience armed conflict tend to be those with characteristics that provide the means or motives for war. They include secluded places where insurgents can hide and exploit valuable natural resources to finance military activities.



Inaccessibility and vegetative cover can also facilitate lucrative illegal activities such as cultivating illicit crops and smuggling. People may resort to violence to gain control over natural resources or because they feel neglected or mistreated. Often, motives are multiple and shift over time, combining political, religious or ethnic dimensions with personal incentives such as a desire for income, wealth, status, revenge or security or loyalty to specific individuals (Goodhand, 2003).

FORESTS AND VIOLENT CONFLICT

Forested regions in poor countries usually have many of the characteristics associated with locations where violent conflict occurs. They tend to be remote and inaccessible. They often have valuable timber, petroleum, land, ivory, diamonds, gold and other minerals, which insurgents can exploit or tax. Forest dwellers frequently resent that outsiders benefit most from these resources. Governments have tended to see forested regions as peripheral places with few people and little political importance or economic value, and have only focused on them to extract timber or minerals. Thus, forested regions have traditionally been poorly integrated into national political processes and receive few public services. Dominant ethnic groups have marginalized indigenous and tribal people in forested regions who also compete with migrants from other areas over resources. Given the limited employment opportunities in many forested regions, taking up arms can seem like an attractive way to earn a living.

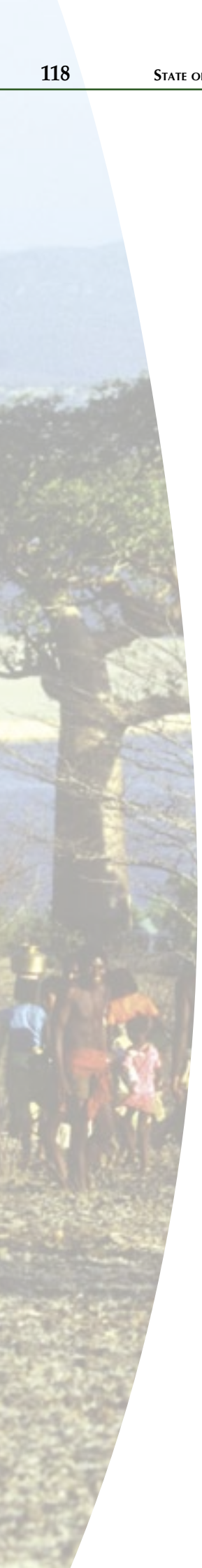
The significance of this problem can be grasped by considering the following – incomplete – list of countries that have experienced armed conflicts during the past 20 years in forested areas: Angola, Bangladesh, Bosnia and Herzegovina, Cambodia, Central African Republic, Colombia, the Congo, Côte d'Ivoire, the Democratic Republic of the Congo, Guatemala, India, Indonesia, Liberia, Mexico, Mozambique, Myanmar, Nepal, Nicaragua, Pakistan, Peru, the Philippines, Rwanda, Senegal, Sierra Leone, Solomon Islands, Sri Lanka, the Sudan, Suriname and Uganda. The forested regions of Bolivia, Brazil, the Lao People's Democratic Republic and Papua New Guinea have also suffered substantial social violence.

Forests as a means for war

Forests can provide refuge, funds and food for combatants. In many of the countries mentioned above, insurgents have used forested regions to hide from government troops. In the case of the Democratic Republic of the Congo, the lack of roads crossing the forested central and northern regions separated the eastern half of the country from the capital, making it much easier for insurgent groups and foreign armies to enter and remain there.

In several cases, governments ignored insurgents or made only perfunctory efforts to control them as long as they remained in remote forested regions, likely concluding that sustained military campaigns in areas of little strategic importance were too costly. Thus, insurgents in countries such as Colombia, Nepal and the Philippines were able gradually to build up military capacity.

Selling timber to fund armed activities is difficult because logs are easy to detect and operations require secure control over the territory. Nonetheless, such cases have been documented in Cambodia, the Democratic Republic of the Congo and Myanmar, and there may be others (Global Witness, 2003; Le Billon, 2000; UNSC, 2001). Insurgents mostly extract other natural resources found in forests to raise funds. For example, high-value metals such as columbo-tantalite (coltan) and cassiterite have been exploited in the Democratic Republic of the Congo in much the same way as diamonds and alluvial gold have in Angola, Liberia and Sierra Leone. These commodities, like ivory, do not require much capital and are easy to transport and conceal. Rebel groups have also been known to extort money from oil and mining companies and large farmers in remote areas. Similarly, armed groups or their supporters cultivate, sell and tax illicit crops grown in inaccessible forested mountain regions in Southeast and Central Asia and the foothills of the Andes.



Many governments use timber revenues to finance their armed forces, particularly in Central Africa and Southeast Asia. While sovereign states have an undeniable right to use their natural resources as they wish, sometimes national laws prohibit these activities, and officers use the proceeds for personal gain. It has also been alleged that, at times, military officials have prolonged conflicts so that they could engage in illegal logging and other illicit activities.

Forests and the motives for war

People rarely go to war over timber, but in Cambodia and Myanmar, for example, insurgent groups dragged out their struggles in part to engage in illegal logging operations (Le Billon, 2000; Global Witness, 2003). Similarly, while conflicts are seldom started to earn money from illicit crops in agricultural frontier areas, armed groups involved in the lucrative drug business have a strong incentive not to disarm. There are also cases in Africa and Asia where the desire to control oil and minerals in forested regions has resulted in conflicts lasting longer than they otherwise would have.

Forest-dwelling indigenous people and tribal groups have participated in violent conflicts in Bangladesh (Chittagong Hills), Guatemala (Quiché, Alta Verapaz), India (Assam, Nagaland), Indonesia (West Kalimantan and West Papua), the Lao People's Democratic Republic (north), Mexico (Chiapas), Myanmar (north) and Nicaragua (Atlantic Coast). Often marginalized or discriminated against, these people have reacted violently to outside attempts to curtail their activities, control their territories or exploit natural resources on their lands. Some have struggled for autonomy or independence, others for greater control over their natural resources, and still others for freedom to engage in their traditional activities or to cultivate illicit crops. Foreign governments and political ideologues have sometimes supported these movements and used them to promote their own political agendas. Their efforts find fertile ground because these groups feel politically disenfranchised. The Islamic movements in the forested regions of Aceh in Indonesia and Mindanao in the Philippines offer examples of this trend. In parts of Africa, ethnic factors also shape conflicts in forested regions. This seems to be the case, for example, in the Democratic Republic of the Congo (North and South Kivu) and Senegal (Casamance).

In other instances, violent outbreaks are the result of long-standing government neglect or a weak and ineffective presence of central authorities. Such situations leave room for political activists and other groups to fill the void. Many Spanish-speaking agricultural frontier areas in tropical Latin America have witnessed widespread social violence, among them the Chapare in Bolivia, southeast Pará in Brazil, the Petén in Guatemala, the Peruvian Amazon and regions of Colombia. The rural insurgencies in Nepal and the Philippines have had similar characteristics.

Individuals often take up arms as the result of government troops violating human rights. This is prevalent in remote areas where there is less supervision and monitoring by the media and NGOs.

Some factors that favour violence in forested regions also apply to mountainous and arid districts, which can also be poor, isolated and neglected. Governments need to pay more attention to these historically marginalized areas, which are frequently inhabited by ethnic minorities.

IMPACT OF ARMED CONFLICT ON FORESTS

While war is almost always devastating for people, it has both negative and positive effects on forests (McNeely, 2003). Armies burn or clear forested areas with defoliants to spot the enemy more readily, and soldiers hunt wildlife for food (Hart and Mwinyihali, 2001; SAMFU, 2002). Land mines not only kill and maim people, but also kill and maim gorillas and other large mammals. When access to remote forests is cut off, forests in secure locations become threatened. Loggers and farmers often take advantage of roads built for military purposes to exploit resources that run through forested areas.

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Large concentrations of refugees and displaced people frequently put great pressure on their local environment, as occurred in Rwanda

Conflicts also tend to strengthen the power of the military, making it difficult for civilian authorities to render army personnel accountable for their actions. Some governments have encouraged their forces to engage in economic activities such as logging rather than fund operations from the central budget. In countries where the military is involved in logging or is closely associated with private logging companies, or where the government allows private forestry companies to establish their own militia for protection purposes, it is much more difficult to enforce forestry and conservation laws (Carle, 1998).

Large concentrations of refugees and displaced people frequently put great pressure on their local environment (Hart and Mwinyihali, 2001; Plumptre, 2003). They move into new areas to hunt, fish, collect fuelwood and cut trees to build houses. Such actions can rapidly deplete local resources.

Moreover, war drains away funds that governments might otherwise invest in forestry activities, and civil servants may be helpless to act when military officials or armed insurgents engage in predatory logging (Plumptre, 2003).

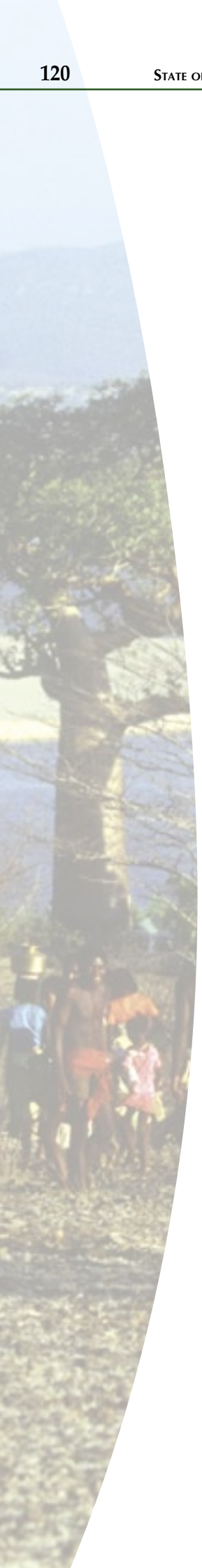
Paradoxically, war can also be beneficial for forests (McNeely, 2003). Conflict forces large numbers of families to flee rural areas, allowing regeneration to take place in the abandoned areas (Alvarez, 2003). Similarly, the presence of land mines over large tracts tends to keep farmers and other civilians out, thereby promoting conservation and natural regeneration in places that have recently been cleared.

War also discourages investment in logging and in destroying forests to plant pastures and tree crops. Ranchers concerned about being kidnapped or having their cattle stolen tend to stay away, and logging companies may be unwilling to risk losing valuable machinery. The decrease in investment in such activities is usually harmful for the economy and, in some cases, for the long-term management of the forest. In the short term, however, it protects the resource.

POST-CONFLICT

Post-conflict situations also pose specific challenges. First, 44 percent of countries affected by conflict return to war within five years of a cease-fire (Collier *et al.*, 2003). After the conflict ends, many of the factors that caused it are often still present, and some may even have been aggravated. Such circumstances undermine economic growth and generate more unemployment, especially among youth. Moreover, former combatants and their political supporters often find it difficult to reintegrate into civilian life. Thus, they may be easily persuaded to take up arms again to earn a living and regain their former status.

Following a war, governments and international aid agencies are too preoccupied with other concerns to focus on longer-term issues such as forest management or conservation. They are under tremendous pressure to restore the economy, and logging is often the only option in many low-income countries. Harvesting activities therefore frequently expand much more rapidly than the public sector's capacity to regulate them, as was the case in Cambodia and is likely to be in the Democratic Republic of the Congo and Liberia. Post-war governments in Colombia, Guatemala and Nicaragua relied on forested areas to settle demobilized soldiers and displaced people, as those were the only large areas of sparsely populated lands (Kaimowitz, 2002).



After conflict, farmers, ranchers and loggers return to resume their activities in rural areas. In addition, heavily armed unemployed young men, with few choices besides logging, commercial hunting and banditry, often join them. Governments may promise former combatants land, training and credit but be unable to keep or sustain these commitments over time. Their inability to deliver sows the seeds for future conflict.

FORESTS FOR PEACE – A STRATEGY FOR ACTION

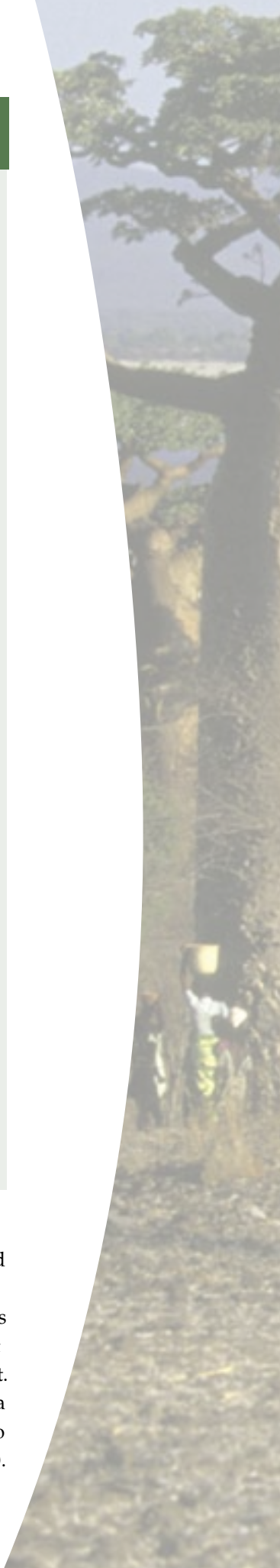
Efforts to promote peace in forested regions must start with removing the motives for conflict before it breaks out. Governments need to take bold steps to recognize the political, cultural and territorial rights of ethnic minorities and others living in forested regions. They need to integrate forest-dependent people into the wider economy and national political life without marginalizing them or forcing them to abandon their homes and cultures. They also need to provide social services and greater access to markets without encouraging an influx of outside settlers (Goodhand, 2003). Small-scale agricultural, forestry, fishing and handicraft projects can open up new livelihood options and reduce the vulnerability of people living in forested regions. Sustainable industrial timber harvesting would also help, as would a more equitable sharing of the benefits from forest resources. A well-trained police force, a judicial system that respects local practices and a system of independent monitoring of human rights violations are other key elements that would increase the feeling of security of local populations.

Such measures, although costly, can be justified in terms of the ethical imperative to promote social justice and sustainable development. However, since resources at a country's disposal are usually limited, investment in these types of expenditure often occurs in more accessible and densely populated areas. Governments need to appreciate that per capita investments required in forested regions, while high, are much lower than the cost of armed conflict, once it breaks out.

Where war does break out, forests and environmental concerns can be important in the peace process. In various countries, both government forces and insurgents have agreed to respect certain environmental rules, recognizing that doing so is in the best interests of the population. In Rwanda, for example, an agreement was reached to avoid harming mountain gorillas during the civil war because of their importance to the tourism industry (Plumptre, 2003). Maoist insurgents in Nepal largely respected the government's community forestry programme, reflecting the widespread legitimacy it had gained. In addition, during peace negotiations between the government and the Revolutionary Armed Forces of Colombia (FARC) in 2000, both sides included environmental issues in the first rounds of talks (Alvarez, 2003).

Sanctions to stop timber sales by insurgent groups and by de facto governments that are not recognized by the international community can sometimes be effective, as can efforts to control money laundering associated with such activities. UN agencies have imposed such sanctions at different times in Cambodia and Liberia (UNSC, 2003) and suggested similar action be taken in the Democratic Republic of the Congo. In the first case, implementation was uneven and the results mixed, but sanctions ultimately played an important role in the collapse of the Khmer Rouge. In Liberia, the war ended before the effectiveness of the sanctions, enforced in response to interference by the government in the internal affairs of its neighbours, could be fully assessed.

It is important to include forestry and other natural resource issues on the agenda in peace negotiations because of their economic importance to opposing factions. Involving separatist movements in controlling timber and other natural resources, with the tax revenues they provide, is key to defining viable options for regional autonomy. Such considerations have been the subject of lengthy discussions concerning the Atlantic Coast of Nicaragua; Aceh and West Papua, Indonesia; Mindanao,



Forests, wood and war in European history

Until recently, access to sufficient supplies of wood was a vital part of strategic readiness in European countries. Uses included fuel, housing, wagons and temporary applications such as supporting trenches in the First World War. Some purposes required wood with specific characteristics, notably in ship building, which demanded softwood for masts and hardwood for keels. Such specialized requirements stimulated exports from Nordic countries or, in the case of ancient Greece, exports from the Black Sea region to Attica. Along similar lines, one of England's motives in colonizing Canada was to ensure access to high-quality wood for masts for the Royal Navy. The incentive for France's adoption of modern silviculture in the seventeenth century was to secure a domestic source of oak for the French navy. Strategic reasons were also cited for the United Kingdom's afforestation programme in the 1920s.

Forest resources were overused, for example, to supply timber for military ships and energy for armies or displaced populations. During and immediately after both world wars, European forests were systematically overcut and principles of sustainable yield forgotten. In the Second World War, one of Germany's strategic weaknesses was lack of access to oil reserves, a weakness it tried to minimize by developing wood chemistry as a replacement fuel. Plans were made to use millions of hectares of plantations in Eastern Europe to supply wood feedstock for this new chemical industry.

Even today, the wood from some forests in eastern France is of lower value because of the bullets and shrapnel embedded in it as a result of battles in the First World War. Among other hazards, harvesting causes injuries and breaks costly equipment. In other armed conflicts, orchards and olive groves were deliberately destroyed as an economic or symbolic act.

The collapse of institutions, authority and morality that tends to occur during some armed conflicts and most civil wars removes an important protection from forests. During the war in former Yugoslavia, it was said that several warlords built large fortunes as a result of illegal logging and export of wood from the country's high-quality forests. When Sarajevo was under siege during the conflict in Bosnia and Herzegovina, the population cut down all forests on the hills surrounding the city, up to the line of the Serb occupation, because they needed fuelwood to get through the winter.

In a few extreme cases, war has helped forests by allowing ecosystems to recover free of human pressure. For example, in the Hundred Years' War between England and France in the fourteenth century, the destruction and subsequent abandonment of many villages had a positive effect on forests.

the Philippines; the Jaffna peninsula, Sri Lanka; and various regions in Myanmar, for example.

Conservation organizations working in conflict situations must take care to maintain their neutrality. They should avoid taking steps that create resentment by curtailing local people's access to natural resources and encourage all sides to recognize the benefits of conservation. It is crucial to take appropriate security precautions and to rely heavily on local personnel who understand the context and the terrain (Hart and Mwinyihali, 2001; Shambaugh *et al.*, 2001).

Refugee relief and humanitarian organizations need to strengthen their commitment to prevent refugee camps from destroying the environment. Guidelines approved by UNHCR in 1996 mark a major step forward in this regard but have yet to be consistently put into practice (UNHCR, 1996).

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Once hostilities cease, the international community can offer long-term and more generous assistance to help restore forest resources, as in this afforestation project in Viet Nam

Ideally, post-war environmental and forestry planning should begin while the conflict is still in progress. Discussions should address where to relocate demobilized troops and the support they will receive to reintegrate into civilian life. It is also essential to bring stakeholders together to discuss how to deal with forests and the environment during the transition period. Because governments are likely to concentrate their resources on the war, the onus on international donors to finance most of these efforts is generally significant.

Once hostilities cease, the international community can help improve conditions by offering long-term and more generous assistance, given that countries have an urgent need for foreign exchange. Such external assistance may prevent the exploitation of forest resources before a suitable regulatory framework is put in place. Since most government agencies in post-conflict situations are weak, new rules need to be simple and focused on a few key activities. Independent monitoring is also critically important.

In post-war situations, countries should not wait to address issues related to the management of natural resources and the environment until peace and economic growth are restored. Cambodia, Liberia, Myanmar and Solomon Islands, for example, have few sources of foreign exchange besides forest products. Therefore, sustainable production and more equitable sharing of benefits must figure prominently in economic development to keep them from falling back into violent conflict. The same applies, to a lesser extent, to Angola, the Congo, the Democratic Republic of the Congo and Sierra Leone, where petroleum and minerals dominate exports and timber is secondary.

Parks located along sensitive borders can help reduce tensions and foster cooperation between neighbouring countries that have traditionally distrusted each other. The Condor Peace Park along the disputed border between Ecuador and Peru is one example. An added advantage is that such parks can attract financial resources and increase non-military presence. In some cases, there may be opportunities to employ former combatants to plant and protect trees.

In summary, forested regions in some countries provide the motives for engaging in war and the capacity to do so. Thus, they are prone to armed hostilities, which can have both negative and positive effects. However, post-conflict situations in countries with significant forests almost always pose an acute danger for this resource. The international community, national governments and others need to make special efforts to avoid the outbreak of conflict in such areas, use forest-related measures to resolve conflicts when they do occur, reduce the environmental impact of conflict and use forests to promote peace and prosperity in post-conflict situations.

Peace requires a commitment that begins with investing in better governance and improving livelihoods in remote forested and mountainous regions. If these areas are prevented from serving as breeding grounds for violence, forests can assume their rightful importance for the social, cultural, economic and environmental contributions they make to the lives of all who depend on them. ◆

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