



**Resources, Abundance
and Competition in the
Bosawas Biosphere Reserve,
Nicaragua**

*Photos: Inset – Mayangna family on their porch in Kwabul,
Lawrence A. Michael/The Nature Conservancy*

*Background – Meeting in Siksayeri where Miskito people
put on a presentation for visitors from Wisconsin, Jim
Welsh/The Nature Conservancy*

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Abstract

Since its creation in 1991, the Bosawas National Natural Resource Reserve in Nicaragua has housed three armed anti-government movements, each seeking reparations for their roles and/or losses during the civil wars of the 1980s. Conflicts over abundant yet valuable resources are common in forested frontier areas like Bosawas because these regions combine limited government presence and legitimacy with inaccessible terrain and multiple ethnic groups, which result in poorly developed property regimes. As a result, groups in these regions often have to take up arms in order to consolidate control over vital resources for which they compete. The Nicaraguan government's failure to address the grievances of former anti-Sandinista Mestizo insurgents, demobilized government soldiers, and the Miskito Indians led each of these groups to seek access to and control over the region's land, forest, mineral and other resources. Unlike most other resource-based conflicts, the situation in Nicaragua emerged from resource abundance rather than resource scarcity. In some cases, use of the natural resources in contention helped to finance military activities. Conservationists can facilitate a resolution to this and similar situation by supporting national forest policy reform, promoting conservation issues as a basis for cooperation and negotiation, and endorsing efforts to restrict illegal trade in natural resources.

1. Introduction

On October 31, 1991, Nicaragua's President Violeta Barrios de Chamorro signed presidential decree 44-91, thus creating the Bosawas National Natural Resource Reserve, the largest protected area in Central America. Subsequently, the United Nations Education, Science, and Culture Commission (UNESCO) declared Bosawas a World Biosphere Reserve. The Reserve itself covers 7,400 square kilometers of tropical moist forest in Northeast Nicaragua. Its buffer zone includes the six municipalities of Bonanza, Cua Bocay, Siuna, Waslala, Waspam, and Wiwilí. The total area of these municipalities (23,000 square kilometers) is slightly larger than El Salvador. The municipalities house around a quarter of a million people (Ramírez, Cedeño and Sánchez, 1995).

During much of the last ten years since the Nicaraguan government created "Bosawas," the Reserve has also housed three armed movements. Former anti-Sandinista Mestizo insurgents came together in the Northern Front 3-80, while demobilized Nicaraguan government soldiers established the Andres Castro United Forces (FUAC). The Miskito Indians formed "descendants from the mother earth" or YATAMA (the acronym in Miskito). These armed movements combined broad political agendas with specific demands for their members and supporters. Many of their demands focused on access to the region's land, forest, minerals, and other resources. The groups were willing to fight to win control over these resources. The armed movements also affected how other people used natural resources in the region by "taxing" or regulating resource use or by discouraging certain types of investment through the threat of violence.

The Bosawas Biosphere Reserve itself was not the cause of the appearance of these armed groups, although resentment over its creation may have played a minor role in local support for their activities. Nor did the Nicaraguan Government create the Bosawas Biosphere Reserve in response to the armed groups' presence. Nevertheless, the armed movements' presence did affect the management of the Reserve, and similar problems plague protected areas in many other countries.

To a certain extent, the conflicts between the Nicaraguan government and the armed movements were resolved through the murder or co-optation of many of the movements' principal leaders. Nevertheless, violence remains endemic in the region and new armed uprisings may spring up at any moment. It has proven difficult to resolve the conflicts through negotiations in part because the government has limited desire and capacity to fulfil its promises and in part because each time the government makes concessions in response to pressure it encourages other groups to take up arms.

This paper examines each of the three armed movements, the role of conflicts over natural resources in stimulating their activities, and how their

presence influenced what happened to the environment. It argues that conflicts over relatively abundant yet valuable natural resources—particularly land and timber—significantly contributed to the emergence of these armed movements and that control over these resources helped to fund the movements' activities. Armed conflicts are common in forested frontier areas such as the Bosawas region where many of the world's protected areas are located because they combine limited government presence and legitimacy with inaccessible terrain and multiple ethnic groups. Because of poorly developed property regimes when groups in these regions compete for resources they often have to take up arms to consolidate their control over them. Finally, the paper notes that the armed conflicts analyzed had both negative and positive impacts on natural resources, depending on the specific armed movement, natural resource, and situation.

The information presented in this chapter comes largely from press reports, project documents, and interviews with key informants, including a handful with the commanders of the armed movements themselves. Based on this information it is difficult if not impossible to fully determine each armed group's motives at different points in time. This is further complicated by the fact that the groups themselves clearly had multiple, varying, and sometimes contradictory motives. While the author has sought to the best of his ability to accurately reflect each group's objectives in his analysis of their activities, he readily admits that his analysis remains partial and not fully consistent.

2. The Context

Recent research suggests that a substantial number of civil wars in developing countries stem from different groups' desire to gain control over valuable natural resources such as timber, petroleum, minerals, and marketable animals. By taking control over such resources armed groups hope to obtain large rents (i.e., incomes that accrue solely as a function of their possession of the resource) without having to transform the resource in any way. In many instances, they can also use the capital that such control over resources provides as a source of funds to finance their military endeavors. Thus, for example, armed insurgencies have sold diamonds mined from regions under their control to help finance their wars in Angola and Sierra Leone. Similarly, both the government and the Khmer Rouge used timber to bankroll a large portion of their military operations in Cambodia (Berdal and Malone, 2000). So, depending on the circumstances, natural resources may constitute either the end or the means of military conflict. Often they are both. This implies that environment-related conflict can emerge not only from resource scarcity, but also from resource abundance.

Typically, struggles over abundant valuable natural resources occur in locations where central government control and national legal systems have

traditionally been weak. Indigenous peoples inhabit many of those locations, often as the result of having been pushed out of other areas coveted by more powerful ethnic groups. Such areas tend to have difficult terrain, poor soils, low population densities, and bad roads, and lie far away from major markets. Scott (1998) refers to such areas as “non-state spaces.” These “spaces” turn out to be the type of area where natural forest ecosystems have survived in their most pristine state, precisely because their natural resources had not historically attracted the sustained attention of outside businessmen or migrants or attracted it only briefly. Because of this high level of ecosystem integrity in these areas and the fact that they did not traditionally appear to be of much economic value, governments have often declared these regions protected areas.

The problems arise when someone discovers that the resources in these areas are worth more than previously believed or new conditions increase their value. Such situations tend to lead to a gold rush mentality and the formation of agricultural, mining, logging, or hunting frontiers. As new groups swarm into areas that previously had a limited government presence and lacked a functioning system of formal property rights, a land grab ensues, and only the strongest and best-armed prevail. This situation is made worse if in addition to such disputes over resources, dissident political forces use the forest as a safe haven or ethnic conflicts break out between outsiders and the local indigenous groups. This is what has happened in Bosawas.

Historically and culturally, the eastern portion of the six municipalities in the Bosawas Biosphere Reserve belongs to Nicaragua’s Atlantic Coast region. Indigenous Miskito and Mayangna villages grow crops along the rivers, hunt, fish, pan for gold, and harvest small amounts of timber. The Miskitos live largely in the municipality of Waspam while the Mayangnas are concentrated in the municipality of Bonanza. Until recently, first British and subsequently North American influence in this area was at least as strong as that of the Nicaraguan government, which never fully integrated the region into national life. The region remained physically isolated from the rest of the country and the Moravian Church provided a large part of the region’s limited available social services. The principal outsiders that came into the area were multinational timber and mining companies. These provided employment for indigenous people and generally did not threaten their territorial rights.

Prior to the 1980s, most non-indigenous *mestizos* in the present-day Bosawas Biosphere Reserve region lived either in small villages in the agricultural frontier areas of Cua-Bocay, Waslala, and Wiwilí or in the mining towns of Bonanza and Siuna. The agricultural frontier areas were largely in the most western and southern parts of the region and dense forest sepa-

rated them from the indigenous areas. Several times during the twentieth century, gold mining boomed in Bonanza and Siuna and large numbers of migrants flowed into work for the mining companies. Otherwise, however, immigration into the Bosawas region by non-indigenous Nicaraguan farmers and loggers remained limited because the lack of roads kept the region inaccessible.

During the 1980s, practically entire Bosawas region was the scene of two bloody wars, one between Nicaragua's Sandinista Government and Miskito insurgents in the east and a second between the Government and the largely *mestizo* Nicaraguan Resistance (RN) in the South and West. In both cases the United States government financed the insurgents. The war forced many people to flee the area, while the government forcibly resettled others. Most economic activity eventually ground to halt.

In an effort to reach peace with the Miskito insurgents, in 1987 the Sandinista Nicaraguan National Assembly approved a Regional Autonomy Law that created two autonomous regions on the Atlantic Coast, each with its own multi-ethnic regional government (Hale, 1994). From that law emerged the Northern Atlantic Autonomous Region (RAAN), which includes four of Bosawas' six municipalities: Bonanza, Siuna, Waslala, and Waspam. Between 1987 and 1990, various Miskito insurgent groups signed peace agreements with the Nicaraguan Government. The war did not come to a complete end, however, until 1990, when Sandinista presidential candidate Daniel Ortega lost the presidential elections to opposition leader Violeta Barrios de Chamorro.

Separate peace negotiations also took place between the Sandinista Government and the Nicaraguan Resistance (RN). In this case also, however, the war did not come to a complete end until the fall of the Sandinista regime in 1990. Following the end of the war, the Nicaraguan Government and international agencies provided special assistance to relocate demobilized Sandinista soldiers and former anti-government insurgents in the area and built new roads and repaired existing ones, which greatly increased the value of the local resources. Tens of thousands of small and medium—sized farmers and ranchers of *mestizo* origin moved into the agricultural frontier villages and towns of Cua-Bocay, Siuna, Waslala, and Wiwilí, which had been off limits during the war (Stocks 1998). Some were attracted by the prospect of clearing forest to plant crops and pasture, even though much of the land was of poor quality. Others went after the gold, particularly since the collapse of large-scale mining activities during the war opened new opportunities for small-scale mining to move in once the war ended. Bosawas' substantial mahogany, cedar, and other timber resources attracted the interest of multinational companies, timber merchants from the Nicaraguan Pacific, and resettled

ex-combatants, as well as local groups of various ethnic origins. The war's termination also allowed government and international conservation agencies into the area to stake their own claims on a portion of the region's resources.

The result of all this has been various conflicts. In some cases those conflicts fueled the armed movements discussed in the following section, although they were certainly not the sole reason the movements emerged. In other cases, they never reached the point of armed violence. *Mestizo* settlers and indigenous communities fought with each other over land. Large mining and logging companies, small-scale *mestizo* miners and loggers, and indigenous people competed for control over timber and gold. The declaration of the Bosawas Biosphere Reserve and the arrival of international conservation projects, which wanted to use the region's resources for carbon sequestration and biodiversity protection, rather than agriculture, logging, and mining, generated further conflicts with both *mestizos* and indigenous communities.

In general, the Nicaraguan Army tried to stay out of these conflicts whenever possible. The Army has its origins in the Sandinista regime. After the Sandinistas lost the 1990 elections they handed over the reigns of the civilian government but the military high command remained intact. While it respects the Nicaraguan Constitution, it has had no particular sympathy for either the administration of President Violeta Barrios de Chamorro or that of Arnoldo Aleman, which followed. Despite this attitude, however, as will be shown below, the Nicaraguan Army has found it impossible to avoid responding to the various armed movements that emerged after the war officially ended in 1990.

3. The Crises and Their Resolutions

This section discusses three separate crises—each associated with a distinct armed movement that emerged after 1990. These movements had common characteristics. All three grew out of poor management by the Nicaraguan government and international agencies of the demobilization of government soldiers and anti-government insurgents that had fought in Nicaragua's civil wars during the 1980s. The government and the international agencies promised the ex-combatants land, credit, training, social services, and other support, but largely failed to fulfil these promises. Tens of thousands of young men who had grown accustomed to military life returned to their communities or moved to the agricultural frontier where they found it exceedingly hard to make a living from agriculture and small-scale extractive activities without government support. They resented the fact that the national government gave out timber and mining concessions to outsiders and created protected areas that limited local communities'

access to natural resources, while showing little interest in either the people who had fought in the war or other local inhabitants. Those that had opposed the Sandinista government felt betrayed by the Chamorro Administration, which they had helped bring to power. Those that had supported the Sandinistas could not understand why the Nicaraguan government—including the Nicaraguan Army—had abandoned them after they had faithfully served the government's interests on the battlefield. National political forces used these sentiments to their own political ends by fostering armed movements that they could use to pressure the national government. This resulted in movements that combined an often confusing and constantly shifting mix of broad national concerns, regional agendas, and specific demands for their members. In the remainder of this section, we examine each of the three crises and their resolution. Then, in the following section, we look at the interactions between the armed movements and natural resources and environmental issues.

3.1 The Northern Front 3-80

After the Nicaraguan Resistance (RN) laid down its arms in 1990, the government earmarked Siuna and Waslala as sites where “development poles” would be established. It chose those areas because many RN fighters came from or had operated there and the areas still had large areas of land available (Cuadra Lira and Saldomando, 1998). The International Support and Verification Commission of the Organization of American States (CIAV/OAS) was to oversee these groups' resettlement (United States Department of State, 1998). However, the demobilized fighters received little titled land, credit, or social services.

Meanwhile, continuing violence between former RN combatants, ex-Sandinista soldiers, and security forces gave many ex-RN combatants a pretense to rearm. Right wing Nicaraguans and Cubans in Nicaragua and Miami and American politicians such as Senator Jesse Helms wanted the Chamorro Administration to eliminate Sandinista presence in the armed forces and return the properties the Sandinistas had confiscated to their previous owners. They were willing to provide funds and political backing for armed bands as a means of pressuring Chamorro to do those things (Nicaragua Network, 1993).

The Northern Front 3-80 emerged in this context. It was the first armed movement in the Bosawas region post 1990, beginning sometime around 1991, and took its name from the pseudonym of former Nicaraguan Resistance (RN) commander Enrique Bermúdez. Its leader, Jose Angel Talavera, initially demanded that Chamorro fire her Ministers of Defense and of the Presidency, whom he considered pro-Sandinista. He also demanded Chamorro ensure the safety of former RN fighters.

At different times, the FN 3-80 negotiated with the government about disarming and the Nicaraguan army effectively left certain areas in the FN 3-80's hands. During much of the period between 1992 and 1997, the FN 3-80 controlled large areas of Cua-Bocay, Waslala, and Wiwilí. Until the International Support and Verification Commission (CIAV-OAS) closed its offices in 1997, it regularly consulted with the FN 3-80s commanders before taking any action. So did an European Union rural development project in Cua Bocay. When the FN 3-80 decided it did not want the government agrarian reform institute (INRA) titling land in the area, their threats and intimidation forced INRA to pack up and leave. Talavera's troops also maintained "order" in the region, by killing off thieves, cattle rustlers, and rapists.

The negotiations between the government and the FN 3-80 began in early 1993. Then, in August of that same year, the FN 3-80 kidnapped a government delegation that had gone to convince Talavera to disarm. In response, a pro-Sandinista force took hostages of its own, including Nicaragua's Vice President Virgilio Godoy. Five days of negotiations followed before both sides finally released their hostages. For the next month or so, the government's army refrained from attacking the FN 3-80. Then negotiations broke down again, in part because the FN 3-80 took two French military attaches hostage (Nicaragua Network, 1993).

Just when the Nicaraguan army was advancing at the beginning of 1994, Cardinal Miguel Obando and the director of the conservative newspaper *La Prensa* proposed a cease-fire. This forced the army to step back. In February 1994, the FN 3-80 declared a unilateral cease-fire. In response, the army announced it would not take any offensive action. After several weeks of negotiations, the government signed a disarmament agreement with Talavera in which it offered to provide land, credit, technical and medical assistance, and to purchase each automatic rifle the FN 3-80 handed over. The CIAV / OAS promised to increase its presence and support in the FN 3-80 security zones. The Nicaraguan Government Army agreed to limit its troop strength in eight towns, including San Jose de Bocay and Wiwilí, and allowed FN 3-80 members to assume key positions in the police departments of Bocay, Cua, and Wiwilí (Nicaragua Network, 1994).

By April 1994, several hundred FN 3-80 members had disarmed and moved into security zones in Cua Bocay and Waslala. However, a number of FN 3-80 commanders, including Sergio Palacios, refused to disarm because they felt there was not enough in the deal for them, and continued to fight on (Cuadra and Saldomando, 1998).

The Nicaraguan government's army scored a major victory when it managed to kill Palacios in 1996 (United States State Department, 1998).

Palacios' death opened the door to new negotiations. The two parties reached an agreement in May 1997 that included land, food, clothing, seeds, housing materials, and services for FN 3-80 members, as well as amnesty and security guarantees (Immigration and Refugee Board of Canada, 1997). At the FN 3-80 commanders' request, the government added a clause whereby "both parties agree to combat the destruction of the forests and the government promises to take the necessary steps to avoid their depletion." Unofficially, the government permitted the FN 3-80 to name the auxiliary mayors in several towns. By the time President Arnoldo Aleman arrived by helicopter to Cua Bocay on July 21 for the formal ceremony declaring the disarmament complete, 1,197 FN-380 members had laid down their arms (Associated Press, 1997). Since the FN 3-80's formally disarmed some former members have formed criminal bands and taken to random kidnappings, assaults, and cattle theft.

3.2 The Andres Castro United Front (FUAC)

After the Sandinistas' electoral defeat in 1990 and the demobilization of tens of thousands of soldiers from the government army, many of those soldiers were left as unhappy and frustrated as their RN counterparts. After years of fighting for the Sandinista Revolution, they saw former sympathizers of the pre-Sandinista Somoza dictatorship return to the country and large landowners regain the properties that the government had confiscated from them. They perceived the Nicaraguan army's high command to be turning its back on its former colleagues in order to protect its own interests while they found themselves out on the street, with little land, credit, training, employment or services. Several thousand of them responded by taking up arms.

Sometime around 1992, former Sandinista military officers led by Edmundo García and Gustavo Navarro formed the clandestine Andres Castro United Front (FUAC) in Managua. García and Navarro named the FUAC after a Nicaraguan who fought against William Walker in the 1850s (González Silva, 1997). They soon moved their base of operations to Siuna where the limited government presence, remote terrain, and dissatisfied population provided optimal conditions for their activities.

In Siuna and Cua Bocay, the FUAC concentrated its attention on villages inhabited by farmers that belonged to pro-Sandinista agricultural cooperatives, which had benefited from the Sandinista agrarian reform during the 1980s. These zones provided fertile ground for the FUAC's activities. The farmers that lived in these zones had been the privileged recipients of Sandinista largesse. But under the subsequent Chamorro and Aleman governments they were completely marginalized and neglected. The later governments stopped providing agricultural credit, cut back on healthcare and education, failed to maintain the roads, and showed no interest in tiling

the farmers' land. When the FUAC arrived in the area and denounced the poor condition of the roads and the lack of transport, credit, electricity, and health care, they found farmers willing to listen. The farmers were even more impressed when the FUAC began killing cattle rustlers and other suspected criminals.

From the beginning the FUAC consistently mixed broad political attacks against President Aleman with specific appeals for improvements in local conditions and demands for material benefits for its own members (FUAC, 1997a, 1997b). It shifted back and forth between defending the local farmers and the residents of Siuna and focusing on its own members, most of who were former soldiers.

The FUAC publicly announced its existence in July 1996. A period of great tension followed. Although the Mayor of Siuna organized a peace commission in February 1997 to dialogue with the FUAD, including the Nicaraguan army and the national police, the negotiations broke down and the situation became a standoff. The Mayor then convoked a civilian peace commission formed by representatives of the churches and local NGOs and several months of tense negotiations and violence followed during which there were casualties on both sides (Immigration and Refugee Board of Canada, 1997). The Mayor of Rosita, a neighbouring municipality, tried to convince the government that foreign mining and timber companies would not invest in the area if the conflict continued, but substantive negotiations did not begin until August 1997.

The negotiations took five months. Between October 1997 and January 1998, the FUAC moved its troops into four "peace enclaves," where they were allowed to maintain their arms without being attacked by the Nicaraguan army. Two of these enclaves bordered on the Bosawas protected area. The FUAC had total control in the enclaves and administered justice there.

As the negotiations proceeded, the general political and regional demands fell by the wayside and both parties increasingly concentrated on what the FUAC soldiers would receive. In the peace accord signed by President Arnaldo Aleman and the FUAC in December 1997, the government committed itself to provide land, health care and scholarships to the FUAC soldiers, as well as six months of food provisions. The government also agreed to allow the FUAC to set up its own Foundation and promised to support FUAC efforts to get international funding for housing, credit, infrastructure, and training (Government of Nicaragua, 1997).

The FUAC officially disarmed on Christmas Day, 1997. Some 423 FUAC soldiers laid down their arms and theoretically returned to civilian life. However, within six months, the FUAC began accusing the government of failing to live up to its commitment to provide land and public services

(Gómez Nadal, 1997). Some former FUAC members re-baptized themselves as the Revolutionary Armed Forces (FAR) and went back to the bush (Program for Arms Control, Disarmament, and Conversion, 1998). In November 1999 these groups kidnapped a Canadian mining expert and several others. The Nicaraguan Army accused García of masterminding the kidnapping. Eventually, the kidnappers released the Canadian but soon after both García and Navarro were assassinated under mysterious circumstances (Envío, 2000). Violent bands with unclear motives continue to operate in the area.

3.3 Descendants of the Mother Earth (YATAMA)

Unlike the FN 3-80 and FUAC, Yatama had no central leader. Instead, it was a loose confederation of indigenous military commanders and their followers. For this reason, it is difficult to describe the group's objectives, since each commander held a somewhat different position. The huge gap between Yatama's formal demands and the topics that eventually dominated its negotiations with the government further confuses the situation. The Yatama said that it was fighting for "autonomy" and the "demarcation of indigenous territories." What this means remains unclear. Most Yatama commanders did not feel that Nicaragua's 1987 Autonomy Law or the regional government of the RAAN met their needs, nor did they particularly want land titles for their individual communities.

The Yatama seem to have wanted the government to recognize a single large indigenous territory, allow them to directly govern their own affairs, and compensate them for using their natural resources. They also wanted it to remove non-indigenous soldiers and police from their territory. They were angry that even though they helped bring Chamorro and Aleman to power by fighting against the Sandinistas and despite the fact that their territory was rich in timber, gold, fish, and other natural resources, they remained poor and the subjects of discrimination (Chamorro, 1999). They felt the Chamorro and Aleman governments paid even less attention to them than to the former Nicaraguan Resistance (RN) fighters and that Aleman had personally humiliated them. Nonetheless, despite these broader grievances, the actual negotiations revolved around demands for housing, credit, food, and other types of direct government support.

Between 1992 and 1995, sporadic incidences of violence broke out between the Yatama and government forces on a number of occasions. Each time this occurred, the government calmed the situation by promising small concessions, but then later often failed to keep its promises (Burke, 1995; Cuadra Lira and Saldomando, 1998).

Things heated up again in February 1997, when the Miskito regional Council of Elders held the "IX General Assembly of Indigenous People

and Ethnic Communities” in Puerto Cabezas. That Assembly gave new impetus to the demands for regional autonomy and the demarcation of indigenous territories. About a year later, some 1,500 Yatama combatants assembled in Bilwaskarma and took up arms (Flores, 1998a). Within a short while, Yatama troops controlled most towns along the Coco River and had attacked the military post in Bismuna (Flores, 1998b).

Negotiations began almost immediately. The Nicaraguan Army withdrew most of its troops and left the area under Yatama control. The Army’s high command declared that the problem was political, not military, and that the civilian authorities should resolve it. The Government provided food for Yatama troops while the negotiations continued and offered to give the Yatamas credit and to speed up efforts to pass an Indigenous Land Law.

The negotiations dragged on until June. Then in July, the largest sawmill in Puerto Cabezas burned down, and arson was suspected (Leist, 1998). Although the Yatama did not take credit for the attack, the pace of negotiations picked up again after this incident. The government promised to create offices in Puerto Cabezas and Waspam to assist the combatants in numerous ways, such as providing them with housing, credit, and land. In addition, they promised to help search for Miskito cadavers from the 1980s war, to create a voluntary Miskito police force and furnish it with boots and uniforms, and to begin to demarcate community lands. By February 1999, 1,500 Yatama troops had laid down their arms (López, 1999). Within a few months, however, the Yatama, like the other factions, were also complaining that the government had failed to meet its promises.

4. Relevance to Environment and Security

Three major causal relations link the issues of environment and security in the cases just presented. First, the struggle to control the natural resources of Bosawas and to a much lesser extent the desire to limit the destruction of those resources were important factors contributing to the armed conflicts. All three armed groups were particularly interested in obtaining land, but they were also concerned with timber, and in the case of the Yatama, gold and fish. Second, the groups partially financed their bellicose activities through the exploitation of natural resources or through taxing their exploitation by others. Third, the armed movements themselves significantly influenced the use of natural resources in the region, whether deliberately or inadvertently. A fourth issue that also has relevance for people interested in promoting environmental conservation is the fact that many of the same characteristics that made the Bosawas region an attractive location to be declared a protected area also greatly increased the likelihood the armed movements would operate there. These include abundance of natural resources, remoteness, and poorly defined property rights, among others.

4.1 Natural Resources as Motives of Discontent and Sources of Revenue for Fighting

Both the FN 3-80 and the FUAC demanded agricultural land from the government. In a context of widespread unemployment, where most of the demobilized RN combatants and government soldiers had limited skills, they saw access to land as one of their few options for survival. Forest covered much of the available land and some of the land the groups demanded was within the protected area of the Bosawas Reserve.

Timber was another resource the two movements had an interest in. In certain instances, they simply viewed it as a resource they could appropriate. In other cases, they opposed logging by groups from outside the region, either out of a regionalist sentiment that the benefits from logging would not stay in the area or out of genuine concern about environmental destruction.

In the mid-1990s, the Cua Bocay rural development project financed by the European Union improved the road to Ayapal, the main center of FN 3-80 activities. Outside loggers soon took advantage of this road and moved into the area. FN 3-80 commander Sergio Palacios initially allowed them to work in the area, as long as they gave him money, boots, and other provisions. In Waslala, the FN 3-80 actually issued its own “logging permits” and large numbers of FN 3-80 combatants became chainsaw operators. One person interviewed for this chapter commented that Palacios’ supporters were willing to protect the loggers in exchange for a couple of cartons of cigarettes. Around Bocay, the FN 3-80 served as bodyguards for the loggers and threatened or attacked anyone who opposed their activities (Comisión Nacional de Bosawás, 1995).

Eventually though, Palacios became concerned about the loggers’ negative impact on the environment. The full reasons for Palacios’ conversion on this issue remain unclear, although apparently a local environmentalist convinced him that logging would provoke droughts and dry up local water sources. Some of Palacios’ supporters opposed the loggers and even went so far as to destroy their tractors and equipment. This continued even after the Nicaraguan Army killed Palacios. At the FN 3-80 commanders’ request, the government added a clause in the final peace accord in 1997 whereby “both parties agree to combat the destruction of the forests and the government promises to take the necessary steps to avoid their depletion” (Associated Press, 1997).

In the case of the FUAC, several of the group’s demands related directly to forest resources. It wanted the government to provide the organization a forest concession large enough to provide employment for 500 local people once it disarmed. At the same time, their demands also called for “the

respect and conservation of national natural resources, which includes laws related to the exploitation and management of the same, taking into account the populations of the neighbouring areas.” To elaborate such laws and regulations, they proposed a “technical commission with the participation of environmental organizations and civil society producers and professional groups” (FUAC, 1997a).

From the FUAC’s perspective, these two positions were not as contradictory as they might first appear. During an interview with FUAC commanders García and Navarro in Managua in mid-1998, they made it clear that although they objected to outsiders exploiting the region’s resources they did not object to logging by local people. They assumed the local people would manage the forests in a sustainable fashion. As they put it, “In the FUAC, we believe that the only ones who can save this region is its own population.... They are the ones who can guarantee the sustainable management of their forest resources, of the riches others are trying to snatch away from them” (personal communication, Angelica Fauné, 1998, translation by the author).

This position at times led the FUAC to support activities that destroyed forests and at times led them to take the opposite position. For instance, the FUAC turned a blind eye to the destructive logging activities of an “Agro-Forestry Cooperative,” which operated in a FUAC stronghold and was led by former Sandinista Army Officers. It also strongly supported local road improvements, without any regard for how they might affect forests. In an extreme example, they kidnapped the mayor of Cua-Bocay for failing to build a road he had promised and demanded that the government improve the road from Waslala to Siuna, part of which runs along the edge of the Bosawas protected area.

On the other hand, in a bizarre incident in September 1997, a group calling itself the “Ecological Armed Front (FEA)” issued a communiqué saying it had “taken up arms to defend against the unscrupulous loggers who are principally responsible for the destruction of the environment.” It then confiscated 25 chainsaws and burnt them in the central plaza of Puerto Viejo in Waslala “as a warning against people and companies that dedicate themselves to cutting down forests and destroying natural resources.” The group declared that one of its main objectives was to end government corruption and said it would not respect government logging licenses (Nicaragua Network, 1997). No one has publicly linked the FEA and the FUAC. Nevertheless, the fact that the FUAC essentially controlled Puerto Viejo at the time makes one suspect the FUAC at least tolerated the FEA and may even have been behind it.

However, it must be admitted that while the FUAC undoubtedly resented outside control over and destruction of the region’s natural resources, in

the final analysis this does not seem to have been a central concern. As the negotiations proceeded, the FUAC's demands that related to natural resources and the environment largely fell by the wayside. Both the FUAC and the Nicaraguan government increasingly concentrated on what the FUAC soldiers would receive. The government agreed to set up a joint commission to study the natural resource issues including the Ministry of Environment and Natural Resources, the Ministry of Defense, and the FUAC, but not much happened after that. The main things the government committed itself to in the peace accord President Arnaldo Aleman signed with the FUAC in 1997 were to feed the FUAC members and provide them with land, health care and scholarships (Government of Nicaragua, 1997).

Unraveling the Yatama story is even more complex. If one takes the Yatama commanders' public declarations at face value, the Miskitos' defense of their natural resources was central to their armed uprising. In May 1998, seven Yatama commanders signed an unpublished proclamation in which they said, "Foreign companies and their concessions are freely destroying our Mother Nature and its resources with the support of the government institutions and the regional governments. The forests disappear. The marine species get exterminated. The precious minerals are being depleted. The natural elements become scarce. The wild animals die and all the nature together with the Indians cries out in pain over the destruction" (translation by the author).

Nevertheless, press reports and the author's interviews with Yatama commanders suggest that the Miskitos did not object to outsiders logging in their territory, as long as they controlled the process and indigenous people benefited. Many Miskitos had worked for foreign logging companies and felt positive about the experience. Some people interviewed suggested that the Yatama financed some of their operations by extorting money and materials from outside logging companies, although the author was unable to confirm that. What the Yatama did strenuously object to was central government approval of logging in their territories without their permission. Similarly, they also opposed the government's establishment of the Bosawas Biosphere Reserve on what they considered indigenous territory.

At the Yatama's request, during the first negotiations in 1992, the government agreed to request that a U.S.-financed forestry project hire demobilized Yatama soldiers as forest guards and train them in forest management and silviculture. It also promised to turn over a small sawmill to the Yatama so that Miskito families could construct their houses. In return, the demobilized soldiers agreed to plant three trees to replace each tree they cut (Hurtado *et al.*, 1992). However, these were minor aspects in the negotiations. Even though the Miskitos' grievances related to government

natural resource policies clearly contributed to the subsequent Yatama uprising, ultimately once again the commanders laid down their arms in return for direct government payments and services.

In summary, the desire to gain access to land, timber and other natural resources, and frustrations over lack of local control over and benefits from these resources contributed to the three armed movements—and hence major security problems. Logging also helped finance the groups' military activities. At one time or another, all three armed groups showed concern about forest destruction. Ultimately though, the natural resource and environmental concerns did not prove central to the disarmament agreements the armed movements negotiated with the government.

4.2 The Armed Movements' Impact on the Environment

Independent of the armed movements' motives, they also had a number of important and at times contradictory effects on the environment. On the one hand, the presence of armed movements greatly hindered the Nicaraguan government's efforts to keep farmers and loggers out of the protected areas within the Bosawas Biosphere Reserve. Logging greatly increased in certain areas under the armed movements' control. Both Cua Bocay and Waslala underwent heavy logging during much of the period when the FN 3-80 controlled the area, as did parts of Siuna under that the FUAC "governed," and certain areas of Waspam where the Yatama ruled. Government forestry officials basically stayed out of those zones. However, it is difficult to determine to what extent the armed groups' own regulatory activities limited certain logging activities or what would have happened if the armed movements were not there. The presence of the FN 3-80 facilitated the entrance of former RN soldiers and other *mestizo* farmers into the southern portion of the protected area of the Bosawas Biosphere Reserve. As one American anthropologist working in the area put it, "In a practical sense as well as a kinship sense these guerillas are just another face of the land invasions [of *mestizo* settlers into the Biosphere Reserve]" (Stocks, 1995:13). Government rules prohibiting families from moving to these areas meant little since the government did not control the territory. Due to the FN 3-80's presence in the area, none of the conservation projects in the Reserve was willing to work in the agricultural frontier areas within the Reserve in Cua Bocay or Waslala.

On the other hand, the general climate of violence discouraged investment in cattle ranching, which helped limit the conversion of forest to pasture. The armed presence of the Yatama soldiers undoubtedly made *mestizo* cattle ranchers and other small farmers think twice before encroaching upon Miskito territories. Although both the FN 3-80 and the FUAC favoured cattle ranching and most of their members aspired to become ranchers themselves, their activities inhibited livestock expansion. Their troops fre-

quently ate ranchers' cattle and kidnapped ranchers for ransom. Many cattle ranchers invested elsewhere as a result. In certain instances the FUAC and the FN 3-80 also took specific actions to rid the region of outside logging companies. Finally, the kidnapping of a Canadian mining official by the FUAC in Bonanza likely discouraged mining in the area.

5. Conclusion

What can an organization like IUCN do in a situation like the Bosawas Biosphere Reserve in the 1990s? From Aceh and Papua in Indonesia to Mindanao in the Philippines and Chiapas in Mexico, as well as in Burma, Cambodia, Angola, Rwanda, the Congo, Sierra Leone, Liberia, and Colombia, irregular and semi-regular military forces control large portions of the jungles and mountains. Moreover, little suggests that the end of the Cold War has changed that. The combination of valuable natural resources, weak states, poor people with rich backers, regional and ethnic grievances, and inaccessible terrain remains just as explosive as ever.

The first thing recommended for IUCN is to recognize this fact and its implications. One clear implication is that conservation efforts and the resolution of military conflict must go hand in hand. Unless conservationists firmly commit themselves to addressing the underlying causes of endemic violence in the developing world, ultimately their efforts are likely to fail. Similarly, conservationists must convince governments and international financial and technical cooperation agencies that addressing the governance issues in the forested regions of the developing world is essential to achieve and/or maintain peace in those countries. A second implication is that as long as major conflicts exist in many of the tropical forest regions and government control over and presence in much of the world's tropical territories remains largely fictitious, any international agreement these governments sign or national forest policy they adopt will have little relevance. Paper agreements and paper policies are as unlikely to succeed as paper parks. Given limited resources, the IUCN should concentrate on initiatives that have a good chance of achieving a real impact. This implies only working at the national policy level in countries where the governments actually influence what goes on in the forested regions.

IUCN may also have a role in conflict resolution on the ground. In the conflicts in the Bosawas region, the armed movements raised environmental concerns and brought environmental issues to the negotiating table, but lacked the technical knowledge and understanding that might enable them to shape viable proposals. Potentially, environmental issues have a universal appeal that could allow governments and armed movements to reach agreement, and build mutual confidence. Raising such issues may also open up space to bring other social groups into the nego-

tiations and make them less polarized. The IUCN's unique position of having both governments and non-governments organizations as members could put it in a strong position to take a facilitating role in these processes. To do this it must develop its own capacity to understand these processes, create a set of internal rules and procedures for operating in areas of severe conflict, and learn how to negotiate binding agreements with serious monitoring and verification. Traditional participatory methods that assume good will on the part of all the parties involved are unlikely to succeed in war zones.

To the extent that illegal logging and mining help finance military activities, the IUCN could actively support international and national activities to restrict trade in illegal timber, diamonds, ivory, and similar products. In this regard, it is important to focus not only on the trade itself but also on the Banks that lend money to those that are engaged in illegal activities and receive deposits from them. A number of international agreements exist that limit Bank involvement in illegal activities. Conservationists need to make better use of such agreements and to work to strengthen them.

The IUCN cannot undertake these activities alone. To achieve its conservation objectives it must work closely with international and national agencies concerned with natural security, refugees and displaced people and development assistance. Within this context, it is particularly important to stress the long-term environmental and developmental aspects of armed conflict. Just as is becoming increasingly clear in the case of natural disasters, treating the symptoms of violence as a short-term emergency without addressing the underlying long-term causes of that violence is doomed to fail. Although the Nicaraguan government has more or less succeeded in neutralizing the FN 3-80, the FUAC and the Yatama commanders in the short-term, violent conflict is likely to reappear in the Bosawas Biosphere Reserve in one form or another. Without the permanent creation of new employment opportunities, the provision of basic government services, and the establishment of a multi-ethnic governance system with broad local acceptance, there can be no long-term peace, nor conservation.

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Environment and Security Brief 4

Eco-Terrorism: The Earth Liberation Front and Direct Action

The actions of “eco-terrorist” organizations such as the Earth Liberation Front (ELF) add an ironic, yet relevant dimension to the environment and security debate. Whereas many of the authors in this volume have argued that resource conservation and management can contribute to social stability and peace, eco-terrorists perpetrate direct actions in the name of conservation. While both approaches strive to protect the natural environment, eco-terrorists wilfully inflict damage on those profiting from resource exploitation, using economic sabotage and property destruction. Members of the Earth Liberation Front (ELF) have become eco-terrorism’s most renowned practitioners, having orchestrated a number of high profile and costly attacks. Although they insist their activities are non-violent and “take all necessary precautions against harming life,”²⁶⁵ the FBI considers the ELF among the leading domestic terrorist threats.²⁶⁶

Not to be confused with environmental terrorism, which involves using natural resources both as a target and a tool for depriving populations and destroying property, eco-terrorism aims to slow or halt human encroachment on the environment and draw public attention the effects of development projects. Specifically, it involves the unlawful destruction of the built environment (roads, buildings, and machines)—symbols of capitalism and the environmentally destructive profit motive—in defence of natural resources.²⁶⁷ Subscribing to a deep ecology ethic, which broadens the notion of self to include all of nature, eco-terrorists view their actions as measure of self-defence, measures protecting a “larger self”—the biosphere.²⁶⁸

Formed in 1993, the ELF is a decentralized, non-hierarchical underground movement operating in small, autonomous cells. This structure enables members to maintain their anonymity, thereby providing them with protection from law enforcement. There is no official “membership,” as ELF consists of individuals and groups of people who choose to carry out eco-terrorist activities under its banner, while adhering to several broad guidelines. Operating and recruiting via the Internet, anonymous dispatches claiming responsibility for certain acts are sent to the ELF spokesperson, who then officially notifies the media and public.²⁶⁹ The ELF’s most infamous attack was in October 1998, when they set fire to a ski lodge in Vail, Colorado, protesting resort expansion

and destruction of the lynx habitat and causing some \$12 million in property damage. Reflecting upon the impact of this action, the ELF web site states, "Many of those who felt the earth was defenseless against the capitalistic drive to destroy it now felt hope, and many of those who felt unstoppable in their pursuits for profit at the expense of the natural environment began shaking in their boots."²⁷⁰

Subsequent attacks have been on university labs, warehouses containing genetically modified crops, corporate offices and headquarters, horse corrals, and increasingly, newly built luxury homes. Traditional acts of eco-terrorism continue to be carried out (spiking trees, smashing windows, and slashing tires), but arson has become the method of choice in many ELF attacks. While the practical aim is to dissuade people and businesses from locating in certain areas, critics claim that the ELF's activities only succeed in generating fear among average citizens. And although supporters steadfastly insist that direct actions have neither damaged any natural resources nor resulted in any human casualties, opponents feel that it is only a matter of time before some hapless bystander or firefighter is injured or killed. To those who do not subscribe to the ideology espoused by the Earth Liberation Front, and other eco-terrorists, it would seem that they have juxtaposed security of the earth's natural resources with the security of people's welfare and livelihoods.

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