

The Río San Juan

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The Geopolitics and Ecopolitics of the Río San Juan

Situated between two oceans and two countries in Central America, the Río San Juan is both a trans-isthmian route and a transborder region. As a corridor between the Caribbean and the Pacific, the river has attracted foreign geopolitical designs. As a transborder region between Nicaragua and Costa Rica, the river's watershed served the development of a distinct social and economic network that supported two recent wars. Nevertheless, several Río San Juan environments remain little disturbed, especially the western and eastern wetlands and the tropical forest on the northern side of the river. A large transborder protected area—SIAPAZ—is being developed as a joint Costa Rica–Nicaragua effort to conserve the largest rain forest north of the Amazon. SIAPAZ will provide alternative economic opportunities for people who otherwise would be felling the forest for timber and farms. The project will test the strategy of protecting environments as a principal means of promoting peaceful development.

Figure 1.
Aerial view of the Río San Juan, 1991.
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BOUNDARIES ARE BEING PERCEIVED ANEW not simply as invisible lines that divide and sometimes collide states, but as regions unto themselves, created by overlapping state societies and economies and environments, or by peoples and economies that by choice or force have not been integrated into state domains.^{1,2,5} Transborder regions are often volatile because they are the places where some 70% of the world's small wars are fought—wars that produce considerable numbers of refugees and casualties and great amounts of trafficking in arms and sometimes drugs.³ At the same time, some border regions contain areas of considerable biological richness. For 500 years the Río San Juan, situated between two oceans and two countries, has been Central America's most militarily and politically conflictive area, which indirectly protected the river and large areas of its binational watershed (Figure 1). A large part of this international watershed with its distinct transboundary people and culture and intact environments is being turned into an innovative, binational protected area called SIAPAZ.

The Río San Juan and Watershed

In southern Nicaragua—at the waist of the Central American isthmus (Figure 2)—three geographic features occur side by side that facilitate both north–south and east–west transportation and have for centuries encouraged dreams of an interoceanic canal: an 8000-km² freshwater lake—Lake Nicaragua is the biggest freshwater lake between Bolivia and Michigan; a 20-km-wide land divide between the lake and the Pacific Ocean—the Rivas Isthmus has the lowest continental divide pass in the Americas; and the 200-km-long Río San Juan that connects the lake to the Caribbean and has several hundred kilometers of tributaries, some of which reach far into northern Costa Rica (Figure 3).

The 41600-km² international watershed (70% in Nicaragua, 30% in Costa Rica) is the largest in Central America. The watershed's lakes and rivers occupy a 500-km-long by 80-km-wide lowland—a rift valley between the central mountains and western volcanic chain that extends diagonally across southern Nicaragua and northern Costa Rica. In the western reaches of this watershed, annual precipitation is <1500 mm; much of the tropical dry-forest vegetation has been cleared for agriculture and cattle ranching. The southern watershed area drains the north-facing Costa Rican highlands; many sediment-laden rivers flow into Lake Nicaragua and the Río San Juan (85% of the Río San Juan's water and

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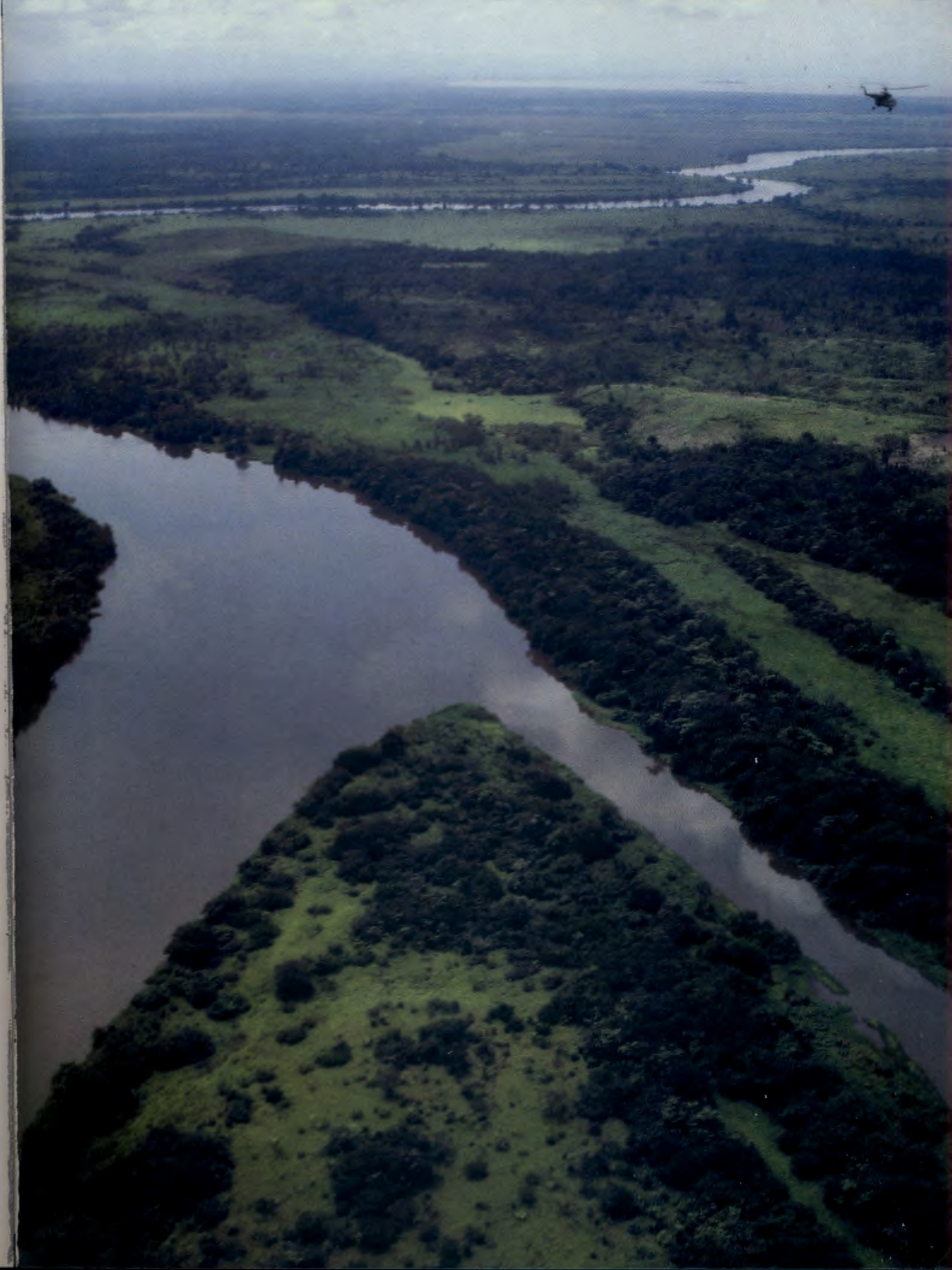




Figure 2 (above inset).
Location of study area.

Figure 3.
Routes across the land bridge.

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probably 95% of its sediment load are from Costa Rican rivers) (Figure 4). At San Carlos the lake ends, and the river begins its 200-km serpentine course eastward through the Caribbean tropical rain forest (annual rainfall, 5000 to 6000 mm) to the delta where the main branch of the river continues as the Río Colorado into Costa Rica to the sea. Many different environments occur in the rather small border region: freshwater lakes and rivers, freshwater wetlands, dry tropical forest, rain forest, and brackish delta wetlands. Together, these environments contain abundant and diverse wildlife unparalleled by any other area of comparable size in Latin America.

Since 1812, the plan to build a transisthmus canal across Nicaragua has been periodically revived, most recently in 1989. But no international canal project was ever intended to be a joint venture with a Central American state. Meanwhile, the perennial international canal proposals discouraged other potential national projects and land-use schemes, and the Río San Juan area remained isolated from national life and institutions centered in Managua and San José. The area evolved, instead, as a trans-border region with a binational identity, a distinct history and economy, and large areas of tropical forest and wetland environments.



The Transborder Region

The lowland Río San Juan watershed and waterways have been a corridor for the migration and interchange of wildlife, peoples, and cultures. Its lowlands and network of navigable rivers have been used for centuries to connect populous western Nicaragua with the resources and trade of the Caribbean coast. The river fostered commerce between prosperous Granada (50 km from the Pacific Ocean) and Spain via Portobelo and Havana in the Caribbean. Natural-resource exploitation, export trade, transisthmian passengers and freight, contraband, and military activities dominated transport on the waterways.

A series of boom-and-bust economic cycles fluctuated with market and resource availability, typical of resource frontier areas. They attracted people to settle the area, especially along the rivers and in northern Costa Rica. Most came from Nicaragua via the lake and rivers, whereas few came from the Costa Rican highlands because of the lack of roads. The introduction of steamboats on Lake Nicaragua and the Río San Juan to transport people and goods between the eastern United States and the

Figure 4.

Concepción Volcano rises from Ometepe Island in Lake Nicaragua. The island is one of Nicaragua's most significant archaeological sites and was spared from combat during the 1980s war. Unpolluted and fish-rich, Lake Nicaragua is Central America's largest body of fresh water and was a major link in the mid-19th century trans-isthmian route.

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Figure 5.
Transborder cultures.



California goldfields (1849–1866) allowed local trade to flourish. Following the 1856–1857 Filibuster War, the area's lowland tropical forest was exploited for timber and forest products, principally rubber.

Northern Costa Rica was settled by Nicaraguans who worked and lived along the vast transborder fluvial network. In the 1940s, the arrival of diesel engines and outboard motors increased the amount and range of river commerce and extractive activities, much of it transborder shipment and settlement. Much of the trade, logging, and rubber tapping was run by Nicaraguan Ladinos. Northern Costa Rican towns such as Upala and Los Chiles were initially settled by Nicaraguans. By the 1950s, most of the northern Costa Rican towns were populated by Nicaraguans, and most of the resource trade network was tied to Nicaraguan towns on the lake, river, or sea. Similarly, the Caribbean rain forest of the Río San Juan watershed was strongly influenced by settlement from eastern Nicaragua, principally by Miskito Indians and Creoles who first came to work on extractive resource products (timber, animal skins, green sea turtles) and, later, in the Matina area on banana plantations and in the port of Limón. As a result, many Costa Rican coast communities, such as Limón, Matina, Parismina, Tortuguero, and Barra del Colorado, are largely populated by

people who either identify themselves as Nicaraguan or trace their family roots to Nicaragua (Figures 5&6).

Beginning in the 1960s, Costa Rica began to emphasize road building into the northern region to facilitate political and territorial integration by frontier-expanding agriculturalists, cattle ranchers, and loggers. Though this accelerated in the 1980s, the primary settlement and land-use patterns already had been established by Nicaraguans in the transborder area.

Thus, from the mid-19th century, the Río San Juan border region became increasingly distinct as Nicaraguan Ladinos, Creoles, and Miskitos settled and transborder resource-extraction activities and trade predominated. The lake, river, and sea waterways were used for cross-border transportation, commerce, and natural resource extraction and export, and providing the fluvial network that unified this region.

Wars and the Watershed

The Río San Juan watershed has been the single most important military location in the history of Central America. It has seen more incursions, invasions, and combat over almost 500 years than any other place. In these centuries of war, the trans-isthmian and transborder waterways—principally the Río San Juan—were the routes and sites of combat.

Who controlled the Río San Juan–Lake Nicaragua route, controlled Nicaragua, and who controlled Nicaragua—the largest and resource-rich Central American country—controlled Central America. Such military thinking fueled wars and attacks by British pirates, Miskito raiders, the British navy and army, American filibuster adventurers, inter-American military strategists, Sandinista insurgents, anti-Sandinista guerrillas, and Miskito nationalists.

On 13 October 1977, 15 to 20 Sandinista rebels crossed from Costa Rica and attacked the National Guard garrison at San Carlos, Nicaragua (Figure 11). This was the beginning of the Sandinista National Liberation Front's (FSLN) guerrilla campaign on the Costa Rica–Nicaragua border—"the

This article helps to show the need of bringing a new emphasis to political geography—as such it helps develop a new approach known as “political ecology.”

A REVIEWER

Figure 6.
Impact of the 1980s War in the
Nicaragua–Costa Rica borderland.



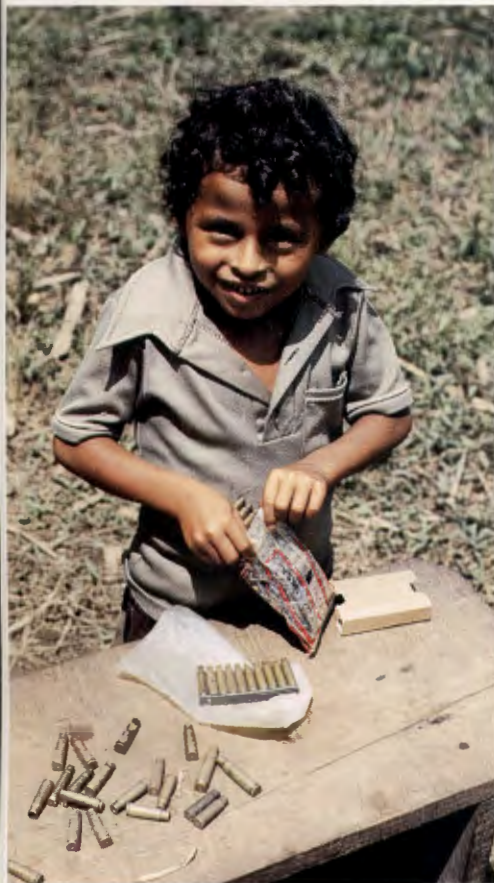


Figure 7.
This boy's only toys were cartridge casings during the 1980s war. Most civilians fled or were relocated from the borderland war zone. Some remained in the Sandinista-controlled upper Río San Juan and some continued to reside in the ARDE-controlled river area to the east (shown here).

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Southern Front." In northern Costa Rica, Nicaraguans joined FSLN units and took part in operations against Sapoá, Cárdenas, Papaturre, and San Carlos. By the end of 1978 a network for recruits and supplies had been formed throughout north-central and northwestern Costa Rica, from Ciudad Quesada, Tilarán, Cañas, and Liberia north to the border. People in small Costa Rican communities such as Santa Cecilia de la Cruz, Delicias, Cuatro Bocas, and Caño Negro, grew extra food for *los muchachos* (the boys), many of whom were kin.

Important in this conflict was the sanctuary of the border and the participation and assistance of the transborder people; unlike in previous wars, the transisthmian route was a negligible factor. Within three years, the border region again became a war zone. Edén Pastora resigned his post as head of the Sandinista Militia (MPS) and went to Costa Rica (1982) where he and his followers formed the Democratic Revolutionary Alliance (ARDE) to militarily confront the Sandinistas and to "recover the Revolution (Figure 12)."

Base camps were established on the Nicaraguan side of the Río San Juan, training camps on the Costa Rican side. The San Carlos and Sarapiquí Rivers and Tortuguero Canal were used to transport weapons and supplies. (Supplies were also flown in by plane to a rough landing strip at La Penca on the Nicaraguan side of the river.) Pastora's 1800 combatants used the cover of Río San Juan watershed forests to attack Sandinista military and state facilities along Nicaragua's southeastern agriculture-ranching frontier. Also allied with ARDE was the Miskito, Sumo, and Rama Indian resistance force, Misurasata, which used the river as a staging area to send people and supplies by sea 160 to 320 km north (Figure 10). Nevertheless, by 1986 ARDE was no longer a serious military threat: Some of the leaders and fighters quit, others integrated into the Contras—the Honduras-based anti-Sandinistas, who began operations out of northern Costa Rica in 1986.

Impact of the 1980s War

The cultural and physical landscapes of the Río San Juan region were dramatically affected by the wars of the late 1970s and 1980s. The wars influenced settlement, land use, economic activities, population numbers and distributions, and environmental destruction and protection.⁴

Agricultural colonization accelerated in the 1980s in Costa Rica and declined in Nicaragua. Costa Rica's programs to consolidate territorial and political control over the northern lowlands, border, and communities involved putting in roads, people, and cattle. Begun in the 1960s, these development programs significantly intensified as a result of the two back-to-back wars which clearly demonstrated the near absence of Costa Rican sovereignty in the region. Communities in northern Costa Rica nearly doubled from 160 in 1972 to almost 250 in 1986. Between 1963 and 1984 the population of Upala, Guatuso, and Los Chiles counties increased >300% from 10 000 to 44 000. Thanks largely to U.S. funding since 1983, land distribution by the Agrarian Development Institute doubled in the northern zone; for example, in the Huetar Norte area, land distribution to landless campesino families averaged 3680 ha/y between 1974 and 1982 and 7560 ha/y between 1983 and 1988.

Conversely, in Nicaragua, the war slowed and stopped agricultural colonization. In the 1960s and 1970s, as in Costa Rica, roads were built to support agricultural colonization and cattle ranching in Chontales and in



the western Río San Juan. But 1982 began seven years of guerrilla conflict in Nicaragua, including the southern and southeastern border area. The government relocated people from the farming and ranching frontier, others fled, and ranchers sold, butchered, or moved cattle. Settlements and land use—strategic hamlets, state-run cooperatives, African oil palm—were concentrated within a militarized perimeter northeast of San Carlos. Dispersed independent farming and ranching dwindled.

As a result of the war, north of the border in Nicaragua tropical forest felling ceased, while south of the border in Costa Rica it increased.⁴ Secondary growth began to fill in abandoned Nicaraguan fields and pastures. But Costa Rican forests were cut at an alarming rate—the highest in Latin America—facilitated by war-accelerated integration policies of new roads, land distribution, and credit.⁶ In Nicaragua, the war ended most hunting and animal trafficking; in northern Costa Rica, wildlife declined due to habitat destruction from forest felling and increased hunting by people who poured into the area from the south and north.

During the 1980s an estimated 200 000 refugees and exiles left Nicaragua and went to Costa Rica. No more than 20% went into refugee camps: Most simply blended into northern and Caribbean lowland and coastal communities, which already had a strong Nicaraguan identity.

The economic disparity between Nicaragua and Costa Rica increased

Figure 8.

Fort Inmaculada Concepción, Central America's second largest surviving Spanish colonial fortification, overlooks the Nicaraguan river town and strategic chokepoint rapids of El Castillo. Built in 1672–1675, the 14-cannon, stone-walled fort was the key Spanish defense site in the wars against British pirates and armies. It was here in 1762 that 19-year-old Nicaraguan heroine Rafaela Herrera rallied soldiers to turn back a British attempt to split the Spanish Empire by seizing the Río San Juan. During the 1980s war, the Sandinista Army placed anti-aircraft cannons on the fort. As part of the transborder SIAPAZ protected area, the fort will become an historic monument and museum.

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Figure 9.
Transborder and transisthmian ecopolitics.

and heightened the significance of the border. In 1991, an agricultural worker earned 12 times more in Costa Rica than in Nicaragua; cattle were worth five times more in Costa Rica; when the dollar exchange rate was 115:1 in Costa Rica it was 5 000 000:1 in Nicaragua. And Nicaraguan economic refugees continue to cross the border into Costa Rica. Cattle, lumber, and wildlife products are smuggled into Costa Rica and sold clandestinely; food, clothes, tools, and hardware are taken from Costa Rica to Nicaragua. Some illegal wildlife products are also taken from Costa Rica to Nicaragua. Most of the goods move from Barra del Colorado to Greytown II on the Caribbean and from Los Chiles to San Carlos to the west. Costa Ricans and Nicaraguans working out of Costa Rica illegally fish in Nicaraguan waters, but are seldom caught due to lack of patrol vessels.

Besides the traditional cross-border exchanges of goods and people, the Río San Juan area is beleaguered by trafficking in drugs and weapons, holdups, robberies, and kidnappings (Figures 6&7). Most of these activities are residuals of the war: former combatants who have yet to return to civilian life, many stockpiled weapons, and a transborder network of people who are used to dangerous, illegal work.

Ecopolitics and the Border Region in the 1990s

Environment has become an important domestic and international political issue for Central America (Figure 8). After a decade marked by war and economic stagnation, and faced with heightened world market competition, Central American states are again pursuing integration and coop-



Figure 10 (above).

An ARDE patrol on the lower Rio San Juan during the 1980s conflict. ARDE was composed of three armed anti-Sandinista groups: the FRS, led by Edén Pastora; the MDN, led by Alfonso Robelo; and the all-Indian Misurasata, led by Brooklyn Rivera. Bruno Gabriel of Misurasata and Comandante José of the MDN watch for a Sandinista force believed to have penetrated ARDE's "liberated area."

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Figure 11 (left).

Its lake-river-mouth location has always made San Carlos an important center of commerce for the region. In 1991, two years after the war's end, the San Carlos waterfront again attracts buyers and sellers from the transborder river area and from the south into Costa Rica.

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We wrote this piece to discuss a transboundary area and the reasons it has been the most recurrent war zone in Central America. It is significant that SIAPAZ is being created, but this initiative does not blot out the persistent geographic transborder and trans-isthmian reasons why this is a geopolitical hot spot.

CORRESPONDENCE

eration policies interrupted by the "Lost Decade" of the 1980s. In addition to the frequent presidential summit meetings on regional peace and economic development, a significant new regional policy issue and initiative is protected and sustainable environments, whose security is important for peace and development. And, increasingly, international development assistance is tied to ensuring environmental safeguards, especially for tropical forests.

Because large areas of the remaining tropical forest are in transborder watersheds with transborder peoples, conservation and sustainable use require binational programs. Otherwise, the fate of forest conservation on one side of an international border will be linked to the rate of deforestation on the other side of the border. Transboundary protected areas offer several advantages over conventional, national projects:

- multinational environmental projects attract more international attention and thus funding;
- they can offer mechanisms and policies for controlling transboundary destructive resource exploitation and contraband;
- they provide the means to improve relations between neighbor countries and to resolve or reduce border disputes;
- they are, perhaps, the most innovative means to secure the pacification and demilitarization of war-torn border regions.^{4,7}

As a result, since the late 1980s, several transborder protected-area projects have been developed, such as La Amistad International Park between Panama and Costa Rica; the Trifinio international project between El Salvador, Guatemala, and Honduras; and SIAPAZ between Costa Rica and Nicaragua in the Río San Juan region.

SIAPAZ (INTERNATIONAL SYSTEM OF PROTECTED AREAS FOR PEACE). SIAPAZ seeks to protect the largest extent of tropical rain forest north of the Amazon. The project will join existing and new border area parks, reserves, and wildlife refuges to become an integrated transborder system of protected areas (Figure 9). In 1987, in the midst of armed conflict, SIAPAZ was promoted as a means to rescue and preserve the historical, cultural, and environmental heritage of the Río San Juan Basin.⁹ Formally agreed to in 1991 by the presidents and natural resource ministers of Costa Rica and Nicaragua, SIAPAZ is being developed by a binational commission made up of representatives of each country's governments, rural organizations, and nongovernmental organizations.

With an area of 11500 km², SIAPAZ contains the 5000-km² Río Indio-Río Maíz biological reserve, a vast stretch of intact tropical rain forest that extends southward across the border and Río San Juan Delta to the Costa Rican protected areas of Barra del Colorado and Tortuguero. The large transborder wetland area from the southern shore of Lake Nicaragua to Caño Negro in Costa Rica forms Los Guatusos Wildlife Reserve, one of Central America's most important areas for resident and migratory waterfowl and other birds. The colonial fortress on the Río San Juan, Castillo de la Inmaculada Concepción, will be reconstructed and preserved as a historic monument. SIAPAZ has attracted local economic development projects for ecotourism, sport fishing, bird watching, and historical tourism; facilities for scientific research; a buffer zone for envi-



Figure 12.

Co-author Bernard Q. Nietschmann traveled with ARDE units to record the war in 1983 and 1984. He returned to the region in 1990 to help work on the transborder SIAPAZ protected area. One task was to travel the river with former combatants to map locations of suspected mine fields left by Sandinista and ARDE forces.

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ronmentally sustainable agriculture; and retraining and employment opportunities for ex-combatants to work as guides and guards in the protected area.

But SIAPAZ faces some formidable problems and challenges. It is a huge area to administer. Although local community support is strong, it is necessary to quickly develop SIAPAZ-related projects that will economically benefit the residents and prove that conservation can be development. Along its northern and southern borders the tropical forest is relentlessly being cut (by impoverished people in Nicaragua and lumber and banana companies in Costa Rica⁸). At the same time, the region has long been an area of conflict and contraband and now is a refuge of still-armed ex-combatants, and a transshipment route for marijuana, cocaine, and illegal cattle. Some of the river's edges are still mined from the 1980s war. The region's transisthmian location continues to attract plans for transoceanic passage: a 1986 proposal for a "dry canal" that would run just south of SIAPAZ and a 1989 Japanese proposal for an interoceanic canal that would be cut through the middle of SIAPAZ. The perennial nature of the canal imperative along the Río San Juan gives a sense of urgency to this conservation effort.

SIAPAZ' success will depend on the political and economic support of the international community, the participation of the transborder peoples and communities, and the ability of Costa Rican and Nicaraguan authorities to overcome historical differences and to work together on a common resource and border.

Ecopolitical considerations are influencing the creation of transborder protected areas between several countries. Costa Rica will have a protected area across both international borders. And in addition to SIAPAZ, Nicaragua is planning another protected area on the west coast and three more for its northern border with Honduras.

Nicaragua is promoting conservation and development within the context of environmental security—the policy that protecting environments is a national security priority because environmental destruction is economically and politically destabilizing. Without securing environments, securing a lasting peace will be jeopardized. The Nicaragua–Costa Rica border region—as with most in Central America—is an area of political instability (guns, drugs, contraband) that destructive resource exploitation would render even more volatile. The binational, transborder SIAPAZ project seeks to safeguard the political environment as well as the natural environment of the Río San Juan.

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