



Defending the Land with Maps

By Derek Denniston¹

INDIGENOUS PEOPLES HAVE OFTEN LOST THEIR LAND BECAUSE THEY COULDN'T "PROVE" THEY OWNED IT. BUT TWO PROJECTS DEMONSTRATE THAT BY MAKING MAPS, THEY CAN HELP TO DEFEND THEIR ANCIENT RIGHTS AGAINST THE INCURSIONS OF NEWCOMERS.

In January 1989, two boatloads of *pistoleros* (hired guns for a cattle rancher) came down from the headwaters of the Patuca River in eastern Honduras and pulled up on the shore of Krautara, a village of the Tawakha Sumu Indians. Armed with pistols and submachine guns, they unloaded their chain saws and sacks of food. They proclaimed legal title to all of the surrounding land, even though they carried no papers. For three months, they occupied the Indian village, forcing one family from its home and clearing at least 20 hectares of lush tropical rain forest for cattle pasture. The next year they returned to bum more forest just over the next hill. This was just one of the proliferating bands of cattle ranchers, loggers, and landless peasant farmers that in recent years have been encroaching on Indian homelands that cling to the last remote forests, savannas, and wetlands of Central America (see map on page 31).

European explorers of the western hemisphere labelled any lands unsettled by their kind as "uninhabited". Sadly, this

colonial ignorance of indigenous peoples has persisted to modern times; the lands inhabited by Indians are usually considered vacant, and are still not recognized as theirs. Securing legal protection for their homelands is perhaps the fundamental challenge indigenous peoples face in preserving their way of life—and preserving the ecosystems that are essential to it.

What threatens to make this problem far worse is the expected doubling of the Central American population to 60 million people within the next 25 years. With no uninhabited arable land remaining, the only way for peasants to find new land to log, ranch or farm is to grab it from those not powerful enough to defend it. "Conflicts over land rights have become the most incendiary and deadly issue in Central America, and by far the biggest threat to the cultural survival of its indigenous peoples," says Mac Chapin, director of the Arlington, Virginia-based Native Lands, a program of the Tides Foundation that works to secure indigenous land rights.

Two years ago, Indian leaders and cultural activists in the northeast corner of Honduras decided to remedy the political invisibility of the Indians of the Mosquitia region by carefully mapping where and how these Garifuna, Pesch, Miskito, and Tawahka Sumu tribes lived. They put together a project that would help the Indians create a detailed, graphic record of their homelands. While land-use maps are not border police, they do establish who occupies a piece of land and how it is being used, while proving that it is not empty and up for grabs.

The Honduran project was organized by MASTA, a Miskito Indian group, and MOPAWI (an acronym meaning "development of the Mosquitia"), a private Honduran development group that had worked closely with indigenous groups on land legalization projects since 1987. The mapping process, which included several workshops, land-use surveys, and finally a national-level forum to present the results, has already been successfully replicated in the Darien region of Panama, home to the Embera, Wounaan and Kuna tribes. Because the indigenous leadership in Panama was stronger, the second project was coordinated by an intertribal group of Indians together with the non-governmental organization Centro de Estudios y Accion Social Panameno (CEASPA), but followed the same methodology used in Honduras.

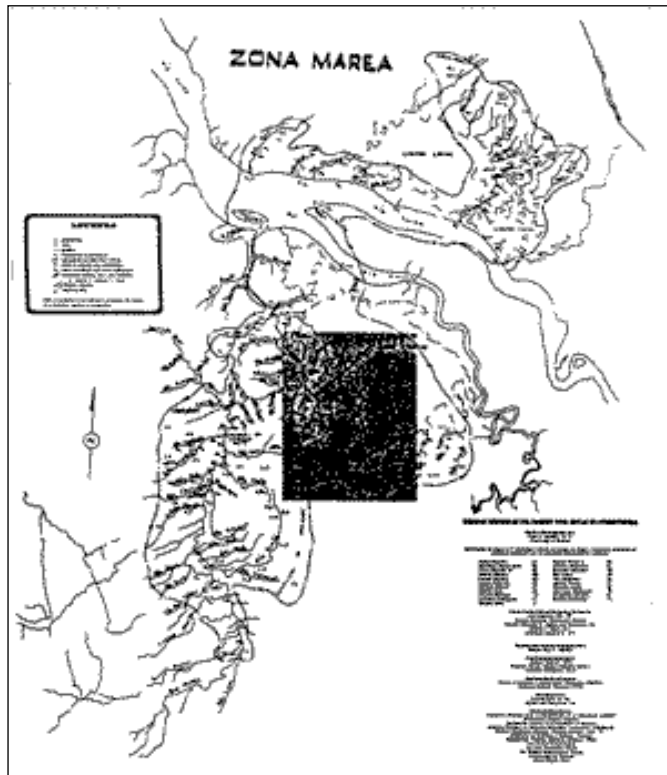


First Stage (above): Portion copied from a hand-drawn land-use map made by an indigenous surveyor and villagers of the Marea sub-region, Darien, Panama. Land that looks like undifferentiated "jungle" to outsiders proves to be supporting a wide range of sustainable practices by its inhabitants.

Second Stage (right): Land-use map of the Marea sub-region, based on the Indians' map, government maps, and aerial photos. The Indians' map proved more detailed and accurate than the one produced by government cartographers. The scale here is 1:50,000. Rectangle shows approximate area covered by the first stage map.

In both the Mosquitia and Darien regions, the rain forests, savannahs, or wetlands are so impenetrable that the only access to settlements is via river. The so-called rainy "season" lasts most of the year, alternating with a few months of ticks and chiggers. The Indians are sparsely settled along the

ivers. Reluctant civil servants provide scant education and health care services. In both regions, while most of the Indians have so far been largely spared violent confrontations with cattle ranchers, they can often see intruders at the edges of their territory.



At the first workshops in Honduras and Panama, the project participants gathered to discuss the process. Peter Herlihy, a cultural geographer from the University of Kansas in Lawrence who had studied both regions extensively, served as the cartographic coordinator. He divided the landscape into zones that were of a manageable size for a single "surveyor" to cover in a few weeks—typically a tract of a few hundred square kilometres. The Indian leaders selected indigenous surveyors for their intimate knowledge of the zone and their ability to speak and write Spanish. Coordinators then worked with them to develop survey questions about land use, and to set procedures for administering the surveys and mapping the land-use areas.

Armed with large blank sheets of paper and the questionnaires, each surveyor set out through knee-deep mud to visit all the

villages in his zone. In each village, the surveyor took a complete census of the population and asked families to describe where they farmed, hunted, fished, and gathered medicinal plants and materials for houses, canoes and crafts. Each village created its own symbols for the various land-use activities, and together the villagers and surveyor drew by hand a detailed map showing where each of these activities took place, relative to the course of the rivers (see maps on opposite page and back cover).

After gathering information from every family, the surveyors gathered for a second workshop with the team of cartographers to organize, clarify, and analyze the information. Making comparisons to aerial photographs and government maps, the team transferred the surveyors' findings to a new, composite 1-to-50,000 scale map (see map on this page). Then, each surveyor returned to his community to check the accuracy of both the hand-drawn and composite maps with the villagers.

In the process of comparing government maps and aerial reconnaissance photographs with the hand-drawn Indian maps, the cartographers found some surprises. Not only were the hand-drawn Indian maps often accurate in their proportions, but the existing government maps were just as often inaccurate. The mapping team found that the areas where the Indians lived coincided almost exactly with those in which the natural landscape had been preserved. Most important, the Indians' maps provided the first genuine picture of where the Indians lived and how they used this land. "No one knows what will happen to the Indian homelands," says Herlihy, "but at least we now have our first clear picture of the territory they use."

At a third workshop, the surveyors combined their maps under the supervision of Herlihy's team for a final revision of a single 1-to-250,000 scale map (see map on page 30). This master map served as the

basis for presentations at the concluding events—two-day conferences in the two countries' capital cities, Tegucigalpa and Panama City.

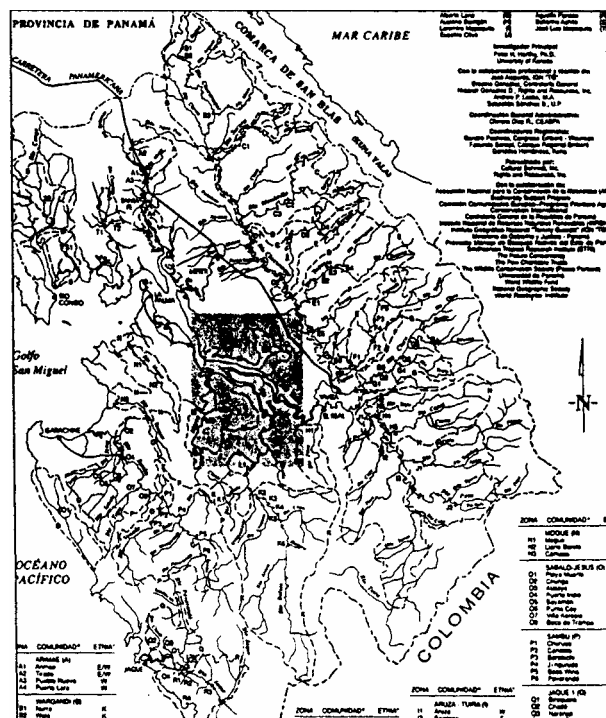
These forums gave the indigenous groups their first opportunity to present their findings and opinions on land use and settlement patterns, the location of ecosystems, wildlife, and threats to their way of life. Listening to the presentations were government ministers, other indigenous peoples, conservationists, and local and international nongovernmental groups. By centring the forums around the scientific maps and technical evaluations, the Indians had built a graphic and credible base from which to launch political campaigns on several issues, including legalizing communal homelands, stemming the incursions of colonization by settlers and development by multinational companies, and resolving the relationship between Indian homelands and national protected areas. "Indians are never allowed to speak. These congresses give the Indians a chance to talk about *their* issues," says Native Lands director Mac Chapin.

The meetings proved to be even more of a success than the participants had expected. Mostly as a result of MOPAWTs work, indigenous land rights are now taken seriously for the first time in Honduras by national politicians. In Panama, Kuna, Embera and Wounaan had never collaborated on this scale. During an informal evaluation of the Panamanian congress afterwards, Elpidio Rosales, the 63-year-old regional chief of the collective Embera - Wounaan territories, said, "Last night, I could not sleep, my head was so full of all the beautiful things that I have seen during the forum."

Other Indians at the meetings agreed. Two Miskito Indians from Nicaragua left so impressed that they asked the Indian coordinators of the Panama City meeting to assist them with a mapping effort of their own in December. According to Native Lands' field coordinator Nicanor Gonzales,

persuading the Miskito to participate in the land-use survey and mapping process will be much easier with fellow indigenous peoples organizing the project, since this will avoid the cultural imposition often created by non-Indian anthropologists. Native Lands is working with geographer Bernard Nietchmann of the University of California at Berkeley to provide the technical support for the project.

One of the Kuna coordinators for the Darien mapping, Gerald Hernandez, was unable to hold back tears in explaining what the project meant to him: "It was an extraordinary experience, but as long as the



rights of indigenous peoples go un-respected, there will be no peace in the country."

While Juan Chevalier, the Panamanian Minister for Government and Justice, did surprise listeners at the Panama City forum with his public support for legal recognition of Indian homelands in Darien, the Indians still have good reason to sense trouble. The Panamanian and Columbian governments have been seeking international financing to build the final section of the Pan-American Highway between the two countries—and

this highway will cut right through the homelands of the Embera, Wounaan, and Kuna.

Having witnessed the swath of cultural and ecological destruction that accompanied the construction of the Bayano hydropower dam and the highway as far south as Yaviza, Mac Chapin worries about what the future holds for the Indians in Darien if the highway is completed. "If there are no police forces protecting the indigenous peoples and the forests, then this highway will bring a tidal wave of landless peasants, drugs and pillage. The consequences for all of Panama and the rest of Central America could be devastating."

Just since 1940, at least two-thirds of the original mantle

of two massive continental ecosystems of North and South America. If the current trend continues, the forest bridge, already threadbare, will be irrevocably destroyed by the end of the decade, according to tropical forest ecologists.

Down the length of the Caribbean coast in Central America, other native tribes have begun to coalesce around the issue of land rights. In southern Belize, the Toledo Maya Cultural Council has been lobbying to establish a Mayan homeland. In Nicaragua, the Miskito are setting up a "protected area" on the Atlantic coast that would ensure their control over the wealth of natural resources in the region. In Costa Rica, the Bribri and Cabecar peoples are forming "councils of elders" to take a leadership role in the La

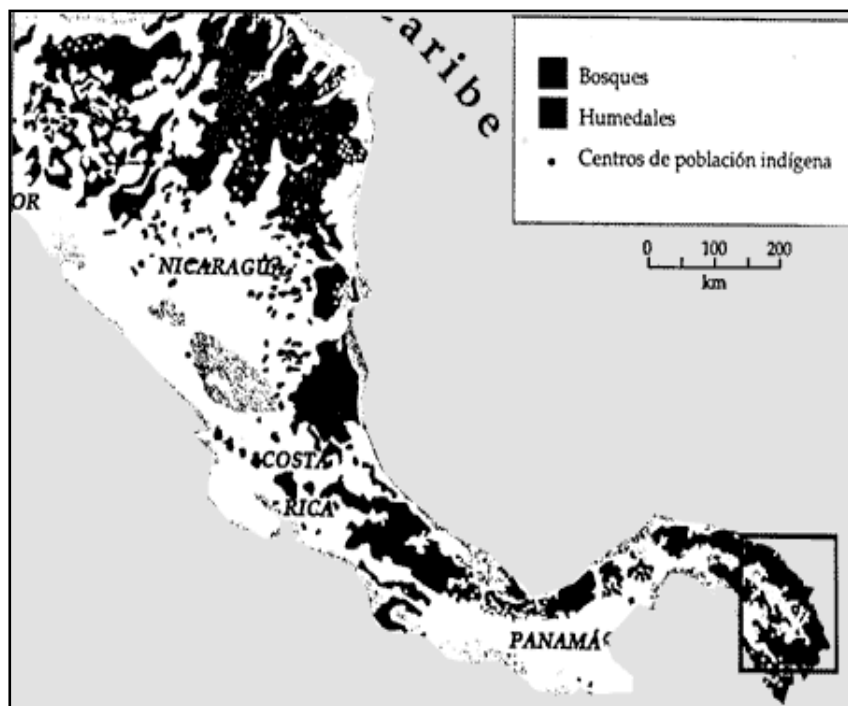
Final Stage (Left):

Master land-use map of the Darien region, combining all the individual sub-regional maps. The scale is 1:250,000.

Rectangle shows the area covered by the second stage map.

The Larger Picture (right)

Indigenous Peoples, Woodlands, and Wetlands in Central America. Rectangle shows the area covered by the final land-use map of the Darien region.



of Central American forest has been cleared. And the pace of deforestation is accelerating. The last remaining stands of tropical rain forest—and the native Americans living within them—are falling before the advances of loggers, cattle ranchers, and peasant farmers who have been forced from their overpopulated, degraded homelands on the Pacific side. This belt of forest is an extremely abundant and diverse region, forming a vegetational bridge between the

Amistad Biosphere Reserve near Talamancas. With the whining of chain saws growing louder, most of these groups have been stirred into action within the last five to 10 years.

Fortunately help may be on the way. In the last few years, international conservation groups have begun to realize that their best hopes for preserving the scarce remnants of the tropical rain forests lie squarely with supporting their inhabitants. Since it is

impossible for conservationists to make informed decisions about which rain forests to save until knowing who lives there and how they are using the forest, mapping efforts are the logical first step. “Maps by Indians are the first cut on creating effective strategies to preserve indigenous homelands and their biodiversity” says Mac Chapin.

Cartographers from both the Honduran and Panamanian National Institutes of Geography who collaborated in the mapping process stated that the Indian map of the Mosquitia was superior to any maps they could have done. It was not until the Honduran map had been produced that conservationists recognized the scientific value of the Indian maps; only then were project staff able to obtain funding for the Panamanian project from several sources, including the Inter-American Foundation, Wildlife Conservation Society, The Nature Conservancy, World Wildlife Fund, and World Resources Institute.

Mapping indigenous homelands debunks the colonialist myth that these lands are uninhabited and degraded: the areas of remaining forest, savannah and wetland almost perfectly overlap with Indian territories. The political momentum created by the process raised the regional awareness of the Indians, showing them the common ground they shared with other indigenous peoples and empowering them to pursue the legal protections they deserve to their homelands.

For millennia, indigenous peoples have carefully adapted their entire lifestyles to the ecological complexities of the local landscape. With minimal environmental impact, they used its natural wealth for their sustenance, coming as close to a sustainable lifestyle as humanity has yet achieved. With their very survival at stake, it is the indigenous peoples who provide the best hope for conserving the diversity of life that remains.