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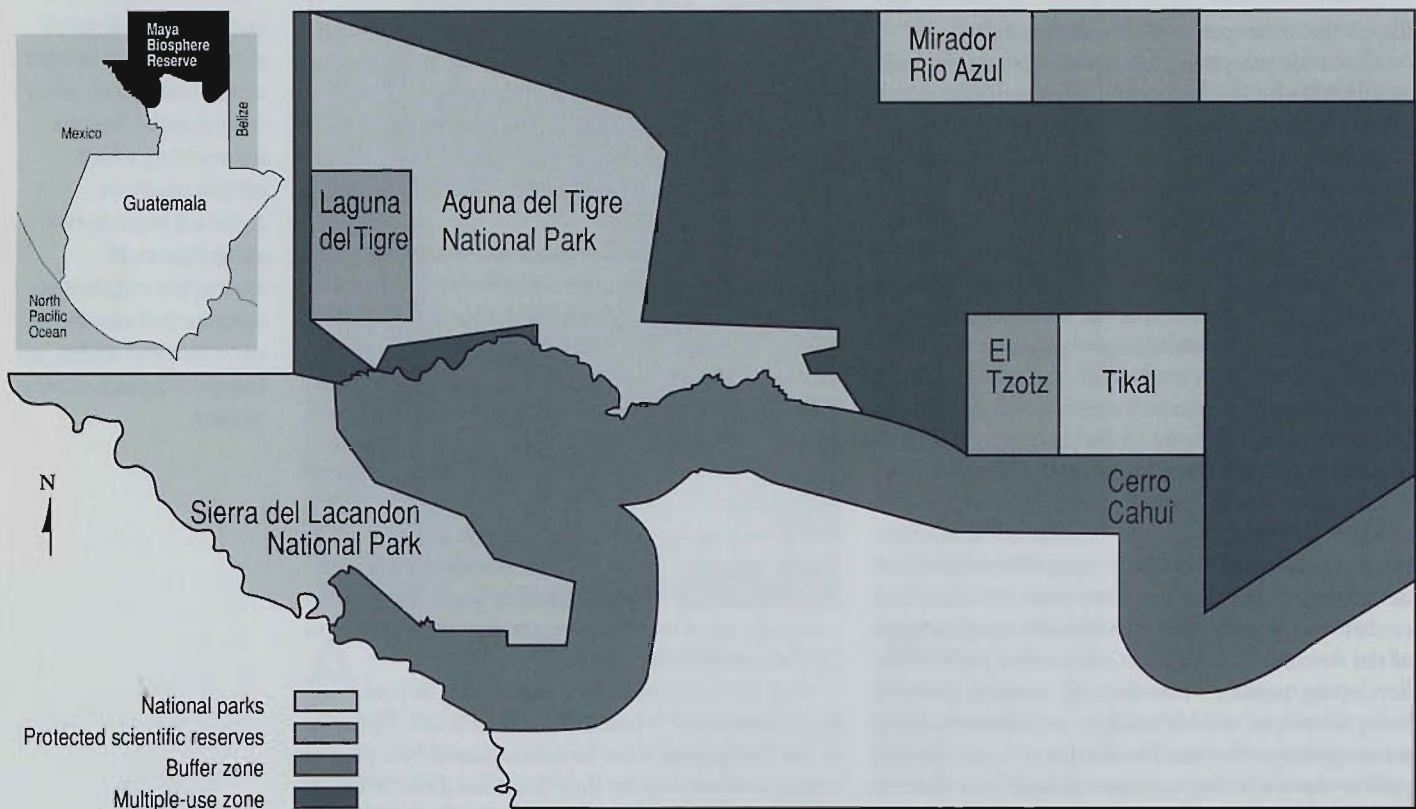
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In short

■ by William C. Thiesenhusen

Guatemala's Maya Biosphere Reserve: Can it be protected?



When people talk about conserving the Latin American rainforest, they usually mean the Amazon, but the moist woodland, dryland ecosystems, and flat savannahs of Guatemala's Petén province are just as fragile and equally endangered.

Recognizing this, the Guatemalan government has recently designated nearly 7,500 square kilometers in the northern third of the Petén as core protected areas—national parks, archaeological sites, and scientific research zones. Another 8,600 square kilometers is a multiple use zone (MUZ), in which sustainable agriculture and forestry are to be practiced. A 15-kilometer buffer zone forms the southern border of the core areas and the MUZ, and the entire region is now known as the Maya Biosphere Reserve (MBR). The precise location of the MBR's southernmost limit is still being negotiated, but at least all of the Guatemalan

territory north of the parallel of 17°10' north latitude is to be included. In fact, the reserve makes up part of a larger forest which reaches into Mexico on the west and north and into Belize on the east.

Citing its fragility, preservationists of flora, fauna, and Mayan ruins decry the fact that the core areas still contain some human settlement, even though most towns are in the MUZ and the buffer zone. The problem is how to convince all of these forest dwellers to conserve their priceless surroundings. This is not an easy task, especially since many are not native *peteneros* but recent migrants who have fled here in the last decade or so to escape land scarcity and guerrilla-military skirmishes in the southern part of the country and civil wars in other parts of Central America.

Eventually, by 1997, the core areas will be patrolled by forest rangers to keep settlement out and the few

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campesinos and others living there will be given opportunities for resettlement. But in the rest of the biosphere reserve, the balancing act is trickier: policy and education must encourage the forest people—whether new in-migrants or seasoned *peteneros*—to earn their living in a sustainable fashion. At the same time, further immigration must be discouraged.

Rational conservation policies also need to be set up—all of this land is public and belongs to the Guatemalan government—for several other groups who use the forest's products. Logging must be more strictly regulated and confined to non-virgin areas. And those who have long harvested forest products—chicle for chewing gum and allspice and palm fronds for the florist industry—without damaging the environs must have their rights protected. At the same time, forest dwellers who farm in the MUZ need to be encouraged to adopt practices that will not further jeopardize those parts of the virgin forest that need to be preserved or the livelihoods of those who use the forest sustainably for other purposes.

Resettled *campesinos* in the vast isolation of the MBR seem to relish their independence and simply want to raise enough food to feed their families. But while many *petenero* farmers have learned from long experience how to live with the forest and conserve it, in-migrants from the southern part of the country often have not.

This difficulty is compounded by the fact that much of the MBR is made up of fragile and nutrient-poor soils not very appropriate for agricultural use. Stripping the area of tree and brush cover exposes the soil to searing heat and heavy, leaching rainfall. Despite this, slash-and-burn farmers still set up their squatter parcels by the side of the road and, after staking their claim, cut down and burn vegetation in whatever area they calculate will provide subsistence. Corn is planted in the charred remains as the rainy season begins.

After a few years, the soil is exhausted and must be returned to natural vegetation for as long as a decade. Thus another wide swath of forest is cut by the *campesino* and burned in a further extravagance of natural vegetation destruction.

Clearly this practice is not sustainable, and for the MUZ the question becomes, what can be done to prevent such wanton destruction? Some think that education is the key. Others think that teaching land stewardship needs to be combined with granting a judicious amount of private property in some form of secure tenure to these squatters. Since the *campesinos* fear that they will soon be evicted, they presently have no incentive to conserve their corner of the forest. Consequently, they mine the soil and allow their fires to claim areas beyond what they need for cropping.

Techniques of slash and burn that contain the fire

within a desired area are known but seldom practiced by the *campesino*, who regards trees and underbrush as enemies of his subsistence. Also, green manuring techniques that allow continuous cultivation are known but not used by the squatters. More security might give peasants an incentive to conserve the land and keep burning to a minimum, activating a drive to invest in conservation techniques. With a titled claim, slash-and-burn farmers might also be less apt to give way to livestock farmers, ever anxious to buy cleared land cheaply for often unsustainable pasture. To date, however, the government agency that provides titles and the office that administers the reserve are at odds over the best policies to follow.

More security and education aren't enough to preserve the MBR. The stream of in-migration to what has become a population "safety valve" for the rest of the country (natural increase plus in-migration has pushed population growth in the Petén up to 7 percent annually) must be stopped. Policies that might dampen this unsustainable population growth are

- making more prime farmland available to *campesinos* in the southern part of the country;
- ceasing to build roads in the MBR, for they only instigate more settlement;
- curbing what civil violence continues in the south; and
- making family planning techniques more available.

However, all of these solutions are either problematic or controversial in contemporary Guatemala. Singling out the *campesino* for the damage to the Petén is blaming the victim. At least as culpable are those who control the best farmland but do not use it productively (the last agricultural census indicated that 1.2 million hectares of good agricultural land in private hands was underutilized).

If the Mayan Biosphere Reserve is to be conserved while forest dwellers are permitted to make a sustainable living there, policy issues in the sending and the receiving communities must be resolved. ■



A *campesino* family near Carmelita, a chicle-gathering hub in the Northern Petén, clears land for subsistence crops.