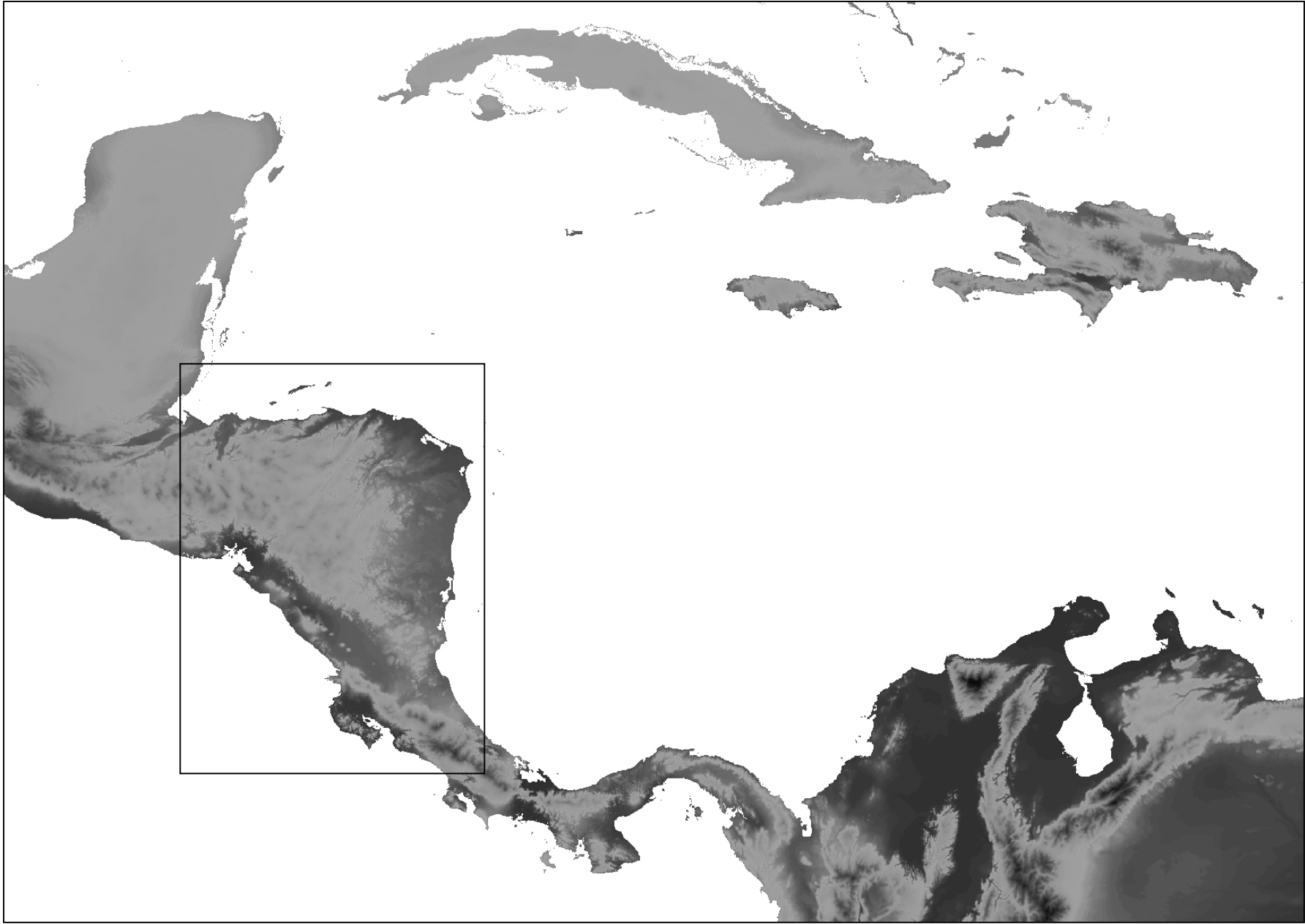
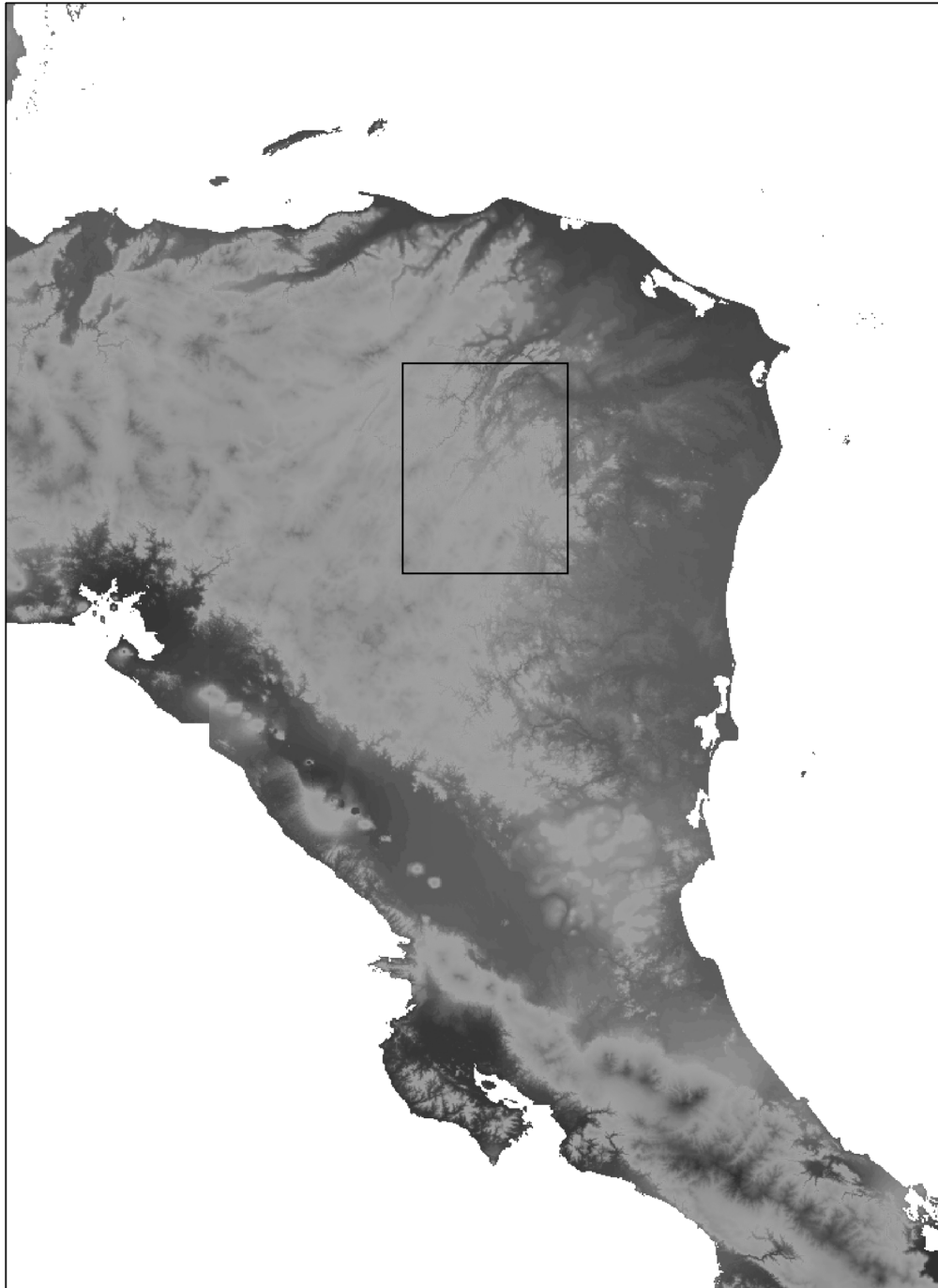


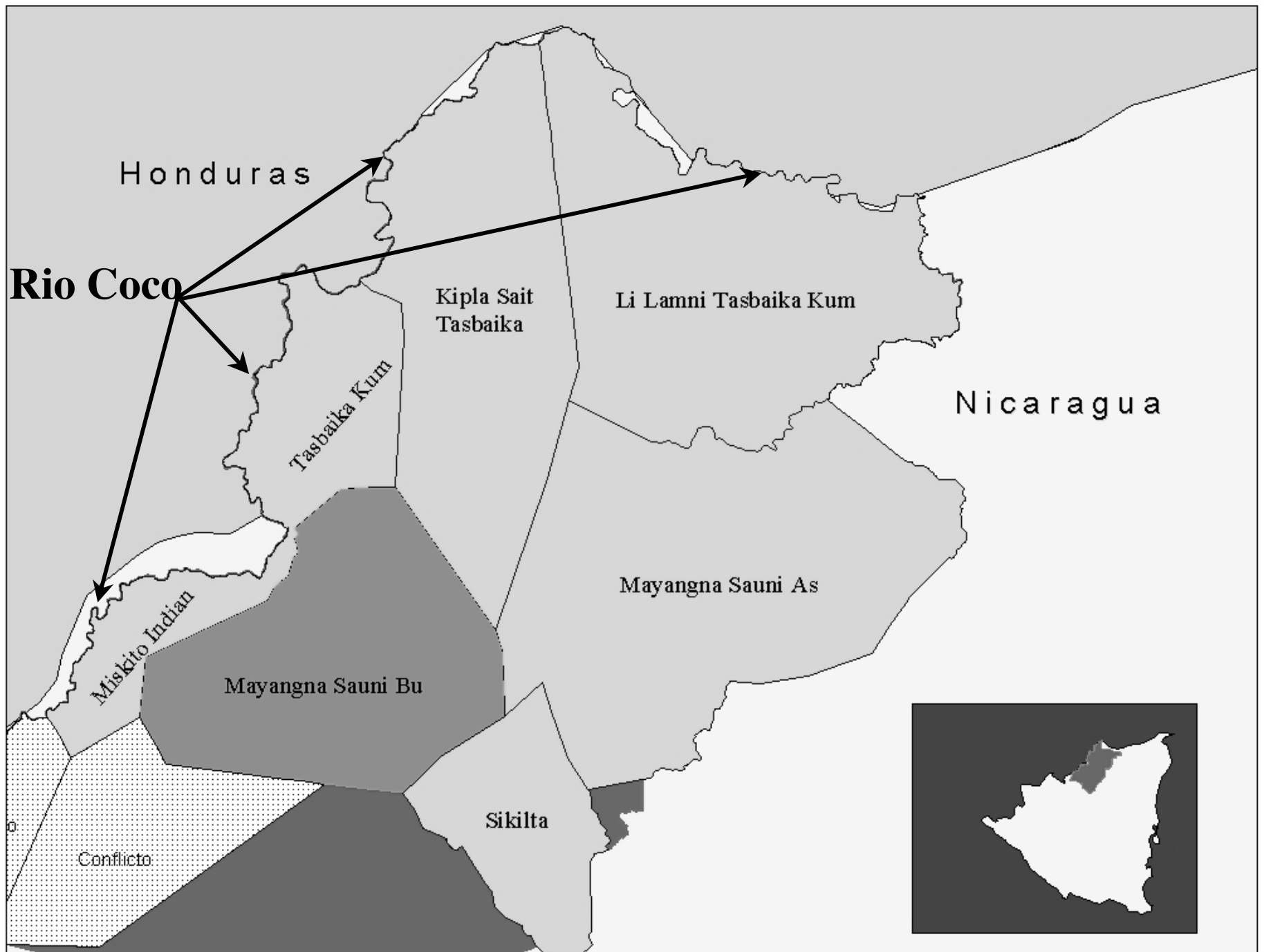
Indigenous Land Use and
Hunting Sustainability in the
BOSAWAS Biosphere Reserve
Nicaragua

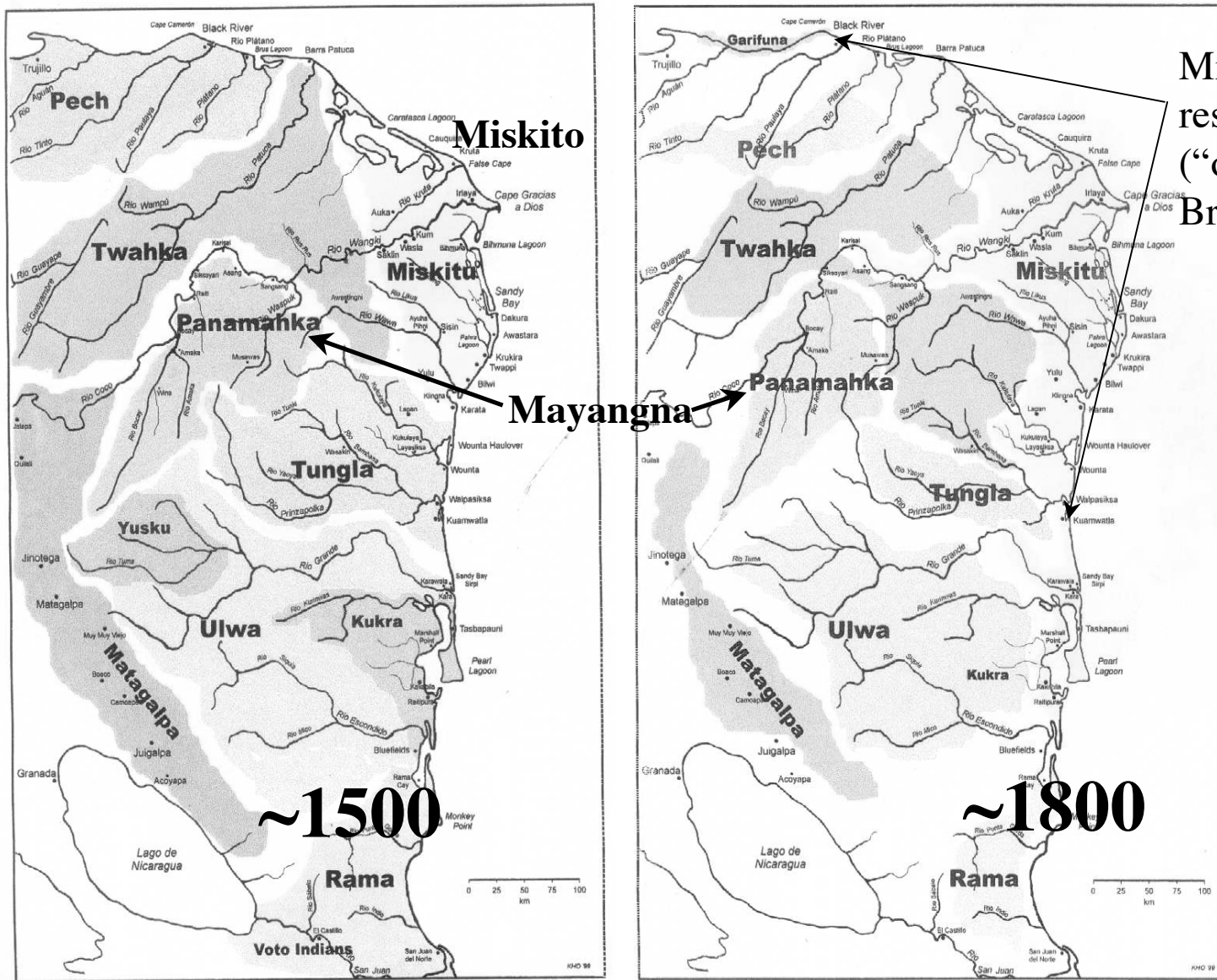
BOSAWAS Biosphere Reserve

- Largest ($\sim 8,000 \text{ km}^2$) tract of rain forest north of Amazonia
- Population: 13,000
 - Mayangna ($\sim 1,200$ ybp) along smaller tributaries
 - Miskito (~ 120 ybp) along Rio Coco
- Six territories + conflict zone
- Designated as Parks in Peril by TNC
- Key to MesoAmerican corridor









Miskito expansion as a result of interaction (“openness”) with the British.

Figure 2. Ethnic mosaic of indigenous cultures in the Atlantic coast of Nicaragua. A. circa 1500; B. circa 1800 (Offen 2000).



- Five of the country's largest rivers
- There are no roads
- All transportation in canoes
- Miskitos live along Coco river
- Mayangna inside the reserve along small tributaries
- Because is so inaccessible the biodiversity is extremely high
- Illegal mahogany harvesting and poaching

BOSAWAS' Birds



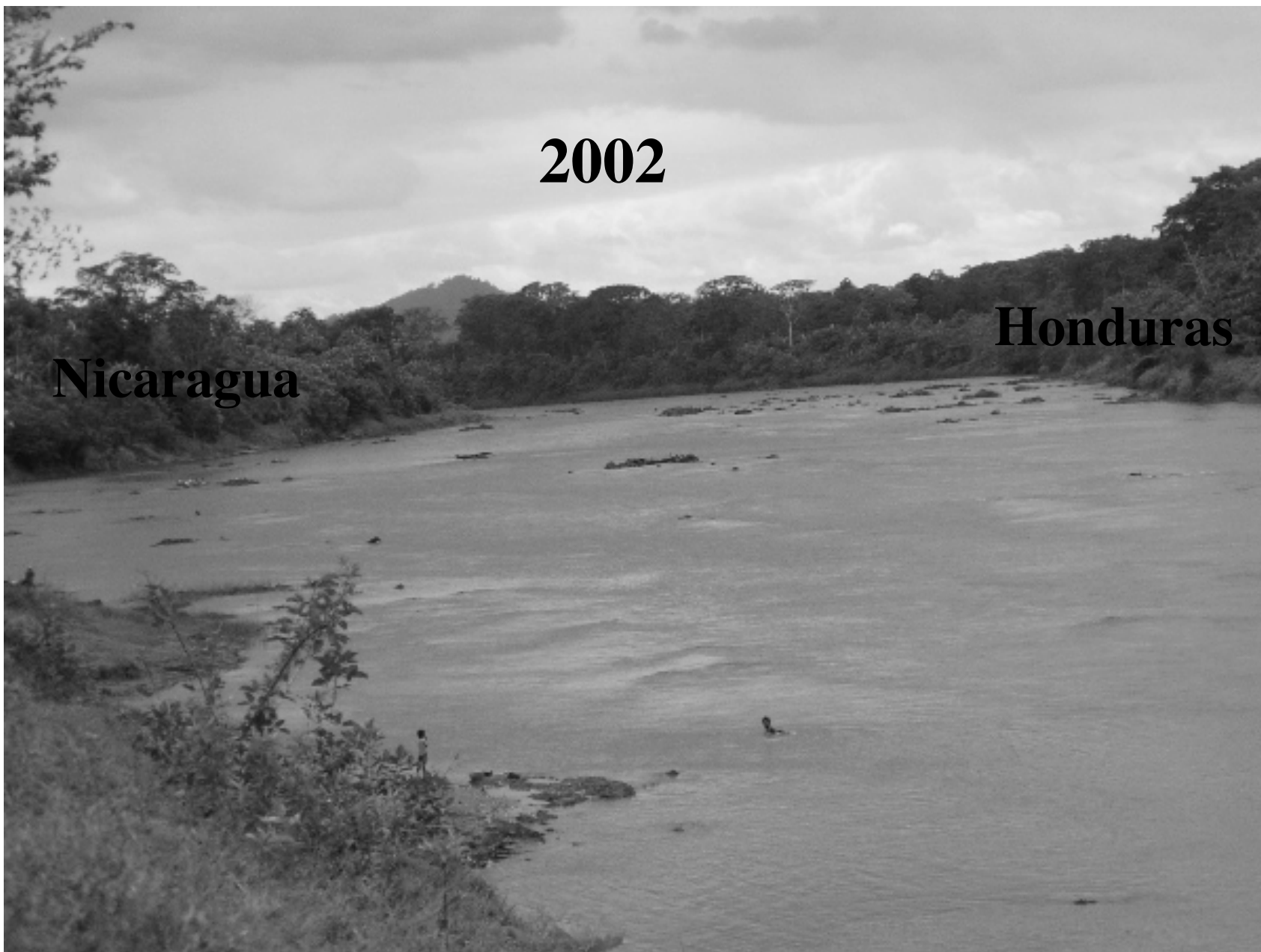
BOSAWAS' Bats



2002

Nicaragua

Honduras



2003

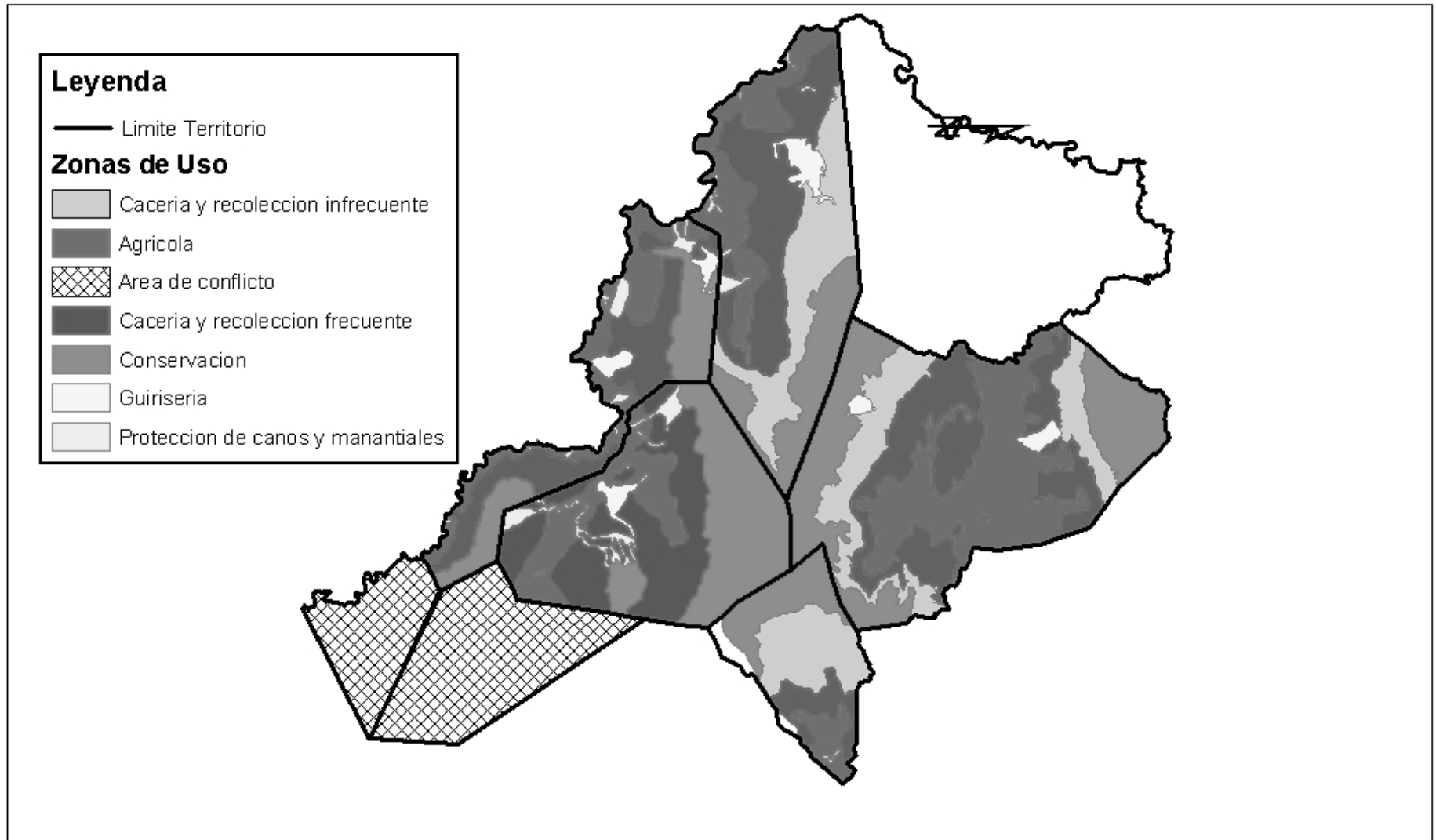
Honduras







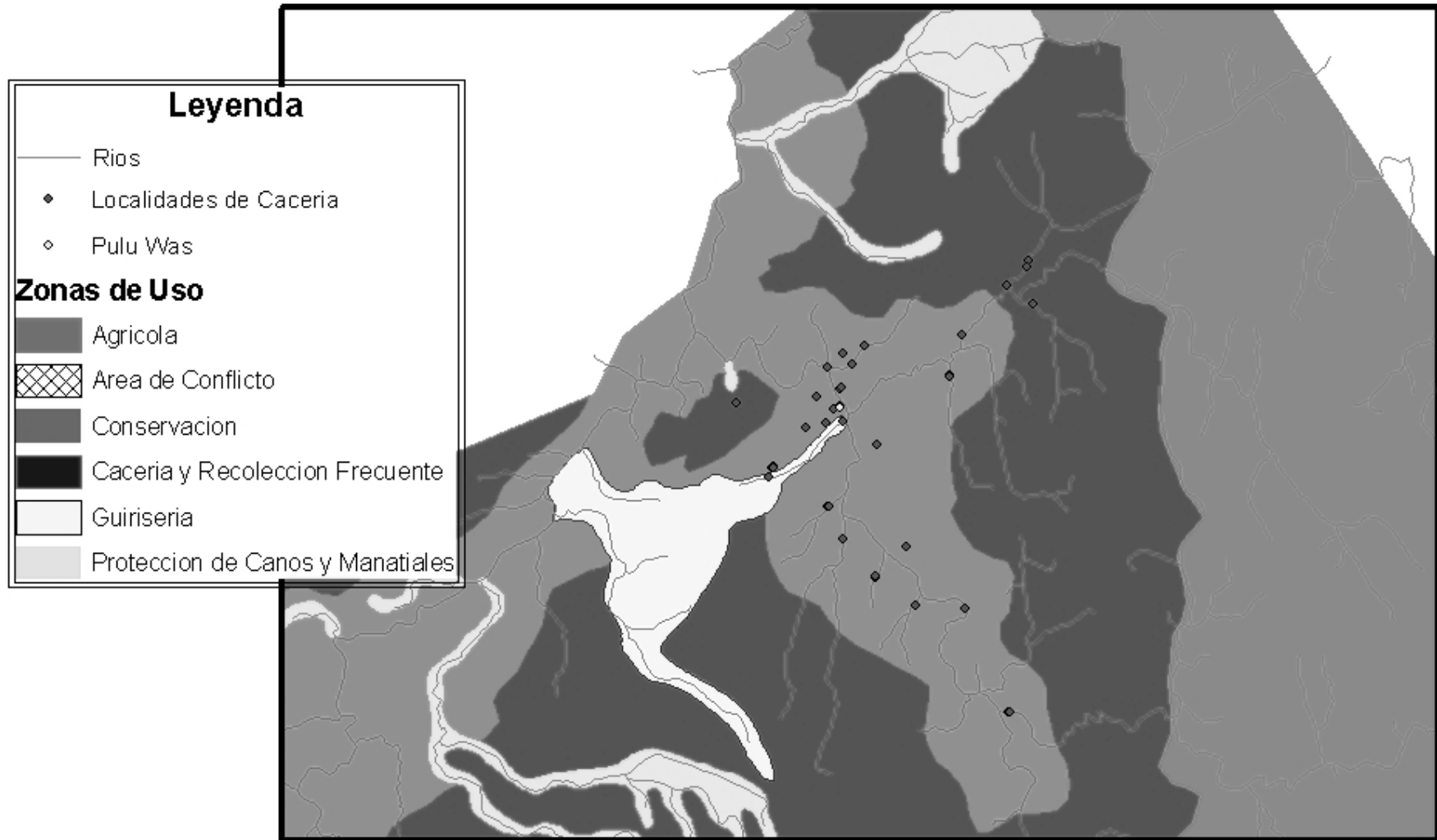
Land Use Zones in the BOSAWAS Biosphere Reserve, Nicaragua



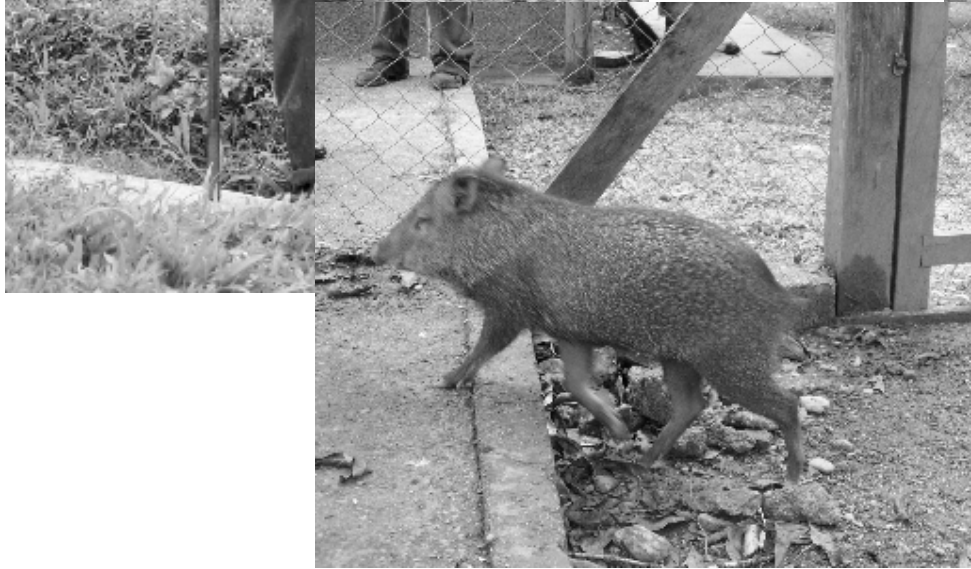
Objectives

- Do the groups reflect their “openness” to western influences in their biocultural-biodiversity coupling?
 - Does the historical land use map reflects the current hunting practices?
 - Are the current hunting practices and intensities sustainable?

Hunting Localities in the Mayangna Suani Bu Territory



Hunting in BOSAWAS



Hunting in Mayangna Suani Bu Territory for 2002-2003

- 191 of 261 hunting localities were registered in designated agriculture land use zone.
- 70 of 261 localities were registered in the hunting land use zone.
- 82% of kills took place in designated agriculture areas.

Conclusions

- Most hunting (>80%) treks took place in agricultural land use zones. None was observed in the conservation zone.
- Most commonly hunted species appear to be well within sustainable levels.
- Two species, the tamandua (ant-eater) and Baird's tapir, may be above sustainable points.

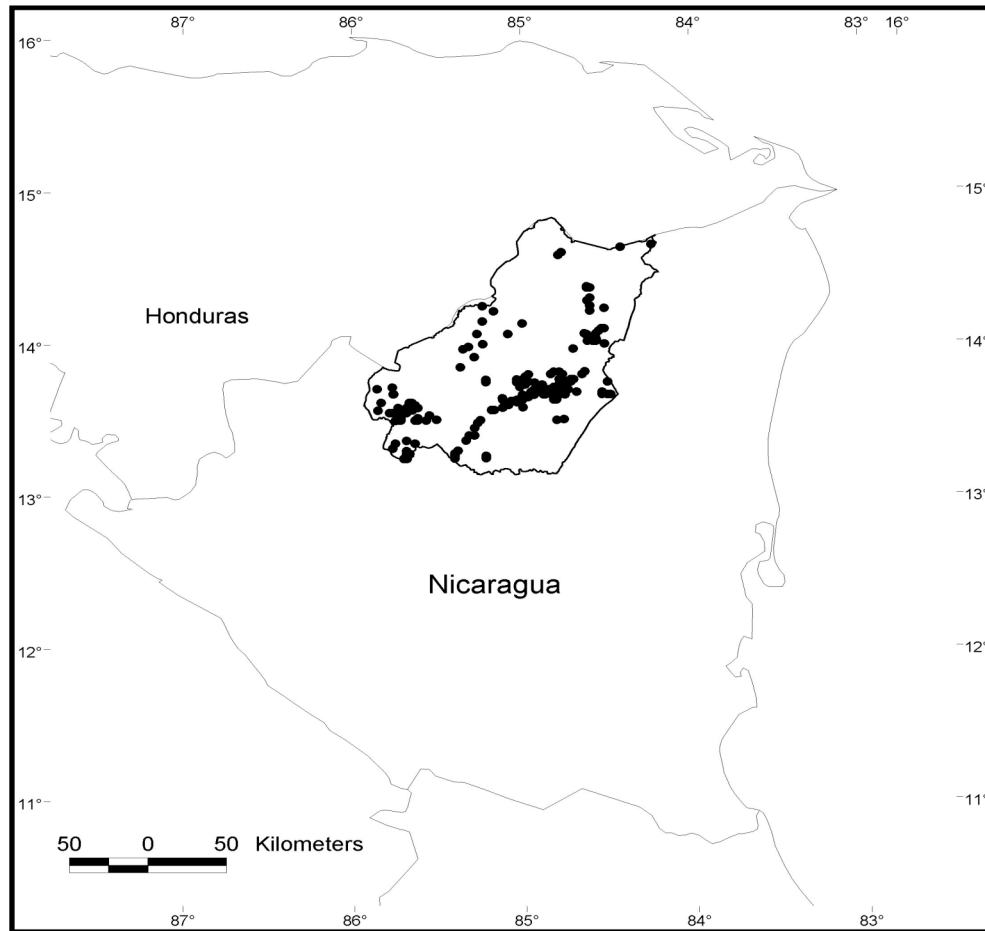


Figure 1. Map of Nicaragua with outline of the Bosawas Bioserve. Dots indicate locations where vegetation was sampled by Stevens et al. (2001).