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COMPARATIVE STUDY OF PRIMATE POPULATIONS IN FRAGMENTS OF LOS TUXTLAS BIOSPHERE RESERVE, MEXICO: LANDSCAPE DYNAMICS AND HABITAT AVAILABILITY (1986-2007).

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Los Tuxtlas Biosphere Reserve is one of the last relicts of evergreen rainforest in Mexico with populations of spider and howler monkeys. This region has been characterized by its high deforestation rates, and although it is now protected, the amount of rainforest keeps diminishing. In this study, land-use and land-cover change (LULCC) was analyzed at landscape and fragment levels between 1986-2007 in the southern portion of the reserve. Landscape dynamics, LULCC drivers and habitat availability are evaluated, and the impacts of habitat transformations on primate populations are assessed. We found the highest annual deforestation rates of 1.5% occurred in this region from 1986 to 2000. In 1986 there were 28 fragments, of which 32% was <10 ha. By 2007, 60% of the fragments was <10 ha. Currently, forest cover in the landscape tends to remain somewhat stable, although it consists of mostly secondary vegetation present in isolated fragments among a cattle grassland matrix. Fragments occupied by primates showed higher deforestation rates compared to forest regeneration rates. Landscape trends indicate that primate habitat is still continually threatened in the reserve. Primate populations have remained relatively stable during these 22 years but processes of demographic decline are starting to show. Primate population viability in this region is linked to political and institutional factors affecting land use and productive systems adopted by locals. Conservation of these species depends on a greater political commitment to adequately manage the reserve and stronger social cohesion to integrate habitat conservation strategies.

Keywords: land-use/cover change, habitat availability, biosphere reserve management, primate conservation