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Competing Land Use in the Area of the W Biosphere Reserve, Benin Republic

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Abstract

The W Biosphere Reserve (WBR) is a nature reserve located in northern Benin and where nature, pastoralism and crop production compete for the use of land. The present study aims at assessing the extent of the competing land use inside the WBR and in its surrounding lands and to analyse the important drivers. To assess the competing land use, GIS data from 1994, 2004 and 2014 were analysed whereas to analyse the drivers, data were collected from regional statistics, community meeting and individuals interviews with pastoralists, crop farmers, members of village association for wildlife management and rangers. Food crop area and cotton cultivation area have expanded over time in the surrounding lands of the WBR while they have declined inside the WBR. It was found that the increase of cropland has been driven by population growth in combination with other factors such the increasing national and regional demand of food crop products, the institutional arrangement and infrastructures in the cotton sector and the use of animal traction in crop farming operations. So, the increase of food crop and cotton cultivation put pressure on prospective agricultural lands and grazing lands. As a result, traditional grazing lands and riverbanks are also converted to crop lands. As a consequence, pastoralists and some crop farmers moved illegally inside the park, either to sustain the feed of their animals, or to clear land for cropping. Because of the reinforcement of patrols by rangers inside the WBR, grazing lands largely diminished and the total number of livestock of pastoralists in the area has declined. Since livestock is still important for livelihood of smallholders and for sustainable food crop production, there is a need for innovative strategies to integrate crop production, livestock production and conservation.

Keywords: Benin Republic, competing land use, conservation, crop production, drivers, livestock, pastoralism, W Biosphere Reserve