

Biodiversity change as a human impact gradient in the biosphere reserve of Ferlo (Northern Senegal)

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ABSTRACT:

The present study aims to investigate the biodiversity of woody vegetation along a gradient of human impacting region in the three constituent parts of Ferlo Biosphere Reserve (FBR): the core area, the buffer zone and the transition area. We conducted an inventory of 110 plots of 900 m² each. Total species richness was 49 species distributed in 32 genera within 16 botanical families. The analysis of contesimal frequency showed that *Guiera senegalensis* is the most common species with a presence of 75% of such records. Examination of species abundance spectrum showed that four most abundant species such as *Guiera senegalensis* (29.5%), *Combretum glutinosum* (15.9%), *Pterocarpus lucens* (11.6%) and *Boscia senegalensis* (10 , 5%). These four species represent 68% of the total individuals of the RBF and are also the four most common species. The spectrum of abundance of families showed that *Combretaceae* is the best represented family with almost half of the number of species (49.7%). The representativeness of biological types and geographical affinity of the species has been established for the woody vegetation in the study area. The study of diversity indices revealed that the buffer zone and the transition area are subjected to multiple uses and experiencing human action. It has a greater diversity and a level of organization with higher timber stand than the central area which is an integral conservation zone.

Keywords:

Biosphere reserve - diversity - flora - abundance