Studies of the Woody Vegetation of the Welor Forest Reserve (Senegal) for Sustainable Use

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Abstract

The Welor area has been classified as a forest reserve since 1935 while waiting for the outcome of studies for its appropriate exploitation based on its biological potential. Due to lack of information on this potential, the plant resources of this forest reserve have been used improperly and excessively. The present study aims at gathering, with an appropriate approach and efficient tools, information necessary for designing a management plan to ensure a sustainable use of the woody resources of Welor Forest Reserve. The results obtained have provided information on the present condition of the woody flora and the vegetation, the potential and the dynamics of the most exploited woody species, and the root causes of the present state of the vegetation of the Welor Forest Reserve. Forty-six woody species, which belong to 39 genera and 25 families, were identified in this Forest Reserve. The most numerous families were *Combretaceae*, *Capparidaceae*, *Mimosaceae* and *Caesalpiniaceae*. The shrubs represented about 95% of the woody individuals. The average density of the woody individuals was 75–181 individuals per hectare. *Acacia seyal* and *Balanites aegyptiaca* were the dominant woody species with the best population structure. None of the woody species exploited for timber reveals a good structure and a good regeneration. Considering the socio-economic context of the area, it appears that the Welor Forest Reserve could be used as a source for firewood.