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# Management methods of agroforestry parks and local perception of their ecosystem services in the Sudano-Sahelian zone of Burkina Faso

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## ABSTRACT

**Objectives:** Agroforestry parks, which are characteristic of agrarian systems in Burkina Faso, are currently experiencing degradation, affecting the social life of rural populations. For the sustainability of production, a better understanding and analysis of the management of these parks and their provided services is necessary.

**Methodology and Results:** Parks management methods in the Saria and Yilou zones, agroforestry species and their ecosystem services were identified through a semi-structured interviews and direct observations among 152 farmers. Assisted natural regeneration (96% and 97%), organic fertilisation (93% and 96%) at Yilou and Saria respectively, pruning (84%) at Saria and mulching (94%), livestock parking (91%), planting (87%), zaï (100%) and ridging (98%) at Yilou are the main management methods of the parks. Woody plants are mainly kept in the parks because of their ability to maintain soil fertility (100%) and to provide food (100% and 98%) and medicinal products (96% and 95%) at Saria and Yilou respectively.

**Conclusions and application of findings:** These results indicate that agroforestry parks are real areas for soil rehabilitation and the supply of wood and non-wood forest products. It is therefore necessary to focus on good management techniques such as planting, protection of regeneration, use of organic fertiliser and animal parking for the restoration and maintenance of agroforestry parks ecosystem services.

**Keywords:** Assisted natural regeneration; farmlands management, conservation of woody plants; soil rehabilitation; West Africa.