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## Using NTFPs to Drive Rural Development without Threatening Biodiversity? A Concrete Example Concerning Four NTFPs in Central Menabe, Madagascar

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### Abstract

The growing demand for food that especially affects developing countries is the result of a decrease in available arable land and demographic growth. In this context, non-timber forest products (NTFPs) are suitable alternative foods.

NTFPs are of great importance to the rural populations in Madagascar, providing a safety net when agricultural products are scarce. In Central Menabe (west coast of Madagascar), two tubers (*Dioscorea maciba* and *Tacca pinnatifida*), a mammal (*Tenrec ecaudatus*) and honey (made by *Apis mellifera unicolor* colonies) are the most important NTFPs that underpin livelihood. Knowledge on the NTFPs management, on the impact of local practices on the biodiversity of products, or on the commercial potential of NTFPs is relatively scant and scattered. Only small-scale studies have been carried out and the results remain largely unpublished.

The present interdisciplinary research aims to contribute to filling the wide gaps. Firstly, it aims to identify the traditional NTFPs management. Secondly, it evaluates the current density and regeneration of the four products, in order, thirdly, to deduce whether the products are being—or will be—threatened by traditional practices. Fourthly, it discusses the commercial potentialities of NTFPs and their possible impact on livelihoods. The research concludes with recommendations for NTFPs managements that are likely to meet the needs of local populations while simultaneously decreasing the villager practices' pressure placed on the products.

The NTFPs local management practices were ascertained by means of 9 participative observations and informal discussions; researchers collected the products together with villagers. Biological inventories were established for 20 to 40 plots of 400 m<sup>2</sup> (for the two tubers) and in 6 transects along an average of 3.5 km (for the honey and the tenrec). The discussion on NTFPs commerce is based on 288 questionnaires completed in 6 villages and on 70 interviews carried out at 7 regional markets. Finally, information concerning socially suitable and ecologically reasonable NTFPs managements was gathered in villages by way of 12 groups who participated in scoring exercises.

**Keywords:** Madagascar, NTFPs biodiversity, NTFPs commerce, NTFPs traditional management