

Sustainable Utilization of Baobab in Venda

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Forests and woodlands across the world provide plant products that support the livelihoods of millions of people. In particular, many poor and marginalized people who live in the savanna woodlands in Africa rely on plant products for their survival. Plant products, or Non-Timber Forest Products (NTFPs), are important for food, nutrition, shelter and energy and, in addition to subsistence use, are often sold to generate a cash income. The immense importance of these plant resources has meant that studies are increasingly focused on their sustainable harvest and management.

A number of wild species have oil-bearing seeds which have become popular ingredients in cosmetic formulations. Species that are wild-harvested for their seed oil include Marula (*Sclerocarya birrea*), African Sausage Tree (*Kigelia Africana*), Mafura (*Trichilia emetic*) (Mafura) and Baobab (*Adansonia digitata*). Where these species are found in rural areas, commercialization is seen as an opportunity to uplift the poor and marginalized people who live there. As cosmetic oils have become more popular around the world, it is predicted that demand will grow. Thus understanding the impact that harvesting will have on wild populations has become very important, and not all species have been adequately studied.



In South Africa, the two most popular indigenous tree species used for seed oil production are marula and baobab. The importance of marula fruit as a food item has meant that substantial research has already been done on the ecology and utilization of that tree. However, for baobab, little is known about the impact of harvesting its fruit. Baobabs (*Adansonia digitata*), also known as kremetartboom in Afrikaans or Muvhuyu in TshiVenda, not only provide seed oil but are also used for food, fibre and medicine. Fruit and leaves are an important source of nutrition and bark is used for fiber. Baobab products have been bartered and sold in urban and informal markets across Africa for many hundreds of years. The more recent interest in baobab seed oil has resulted in a surge of fruit harvesting operations in many parts of the tree's distribution.

In order to assess the sustainability of fruit harvesting, a study was initiated to investigate the population dynamics, phenology, fruit production and recruitment of baobab populations in the Venda area. This information would be used to construct a population matrix model to determine sustainable fruit harvesting levels. The importance of the tree in one of the poorest areas in South Africa, and how the utilization of the fruit could contribute to local peoples' livelihoods, would be explored and assessed. The synthesis and integration of all aspects of this study will represent a considerable advancement in our understanding of the ecology and health of long-lived trees.

