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Master Thesis

The baobab (*Adansonia digitata* L.) in southern Kenya

A study on status, distribution, use, and importance in Taita-Taveta County

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Abstract

Baobab (*Adansonia digitata* L.) is a multipurpose, drought resistant, fruit-bearing, wild savannah tree, and is endemic to arid and semi-arid lands of Sub-Saharan Africa. The different uses of baobab include food, fodder, medicine, fertilizer, handicraft, and shelter. The baobab shows varying importance on local and international levels, and its growing popularity (based on its high nutritional contents) has sparked concern on several levels, including whether the supply (as baobab is an undomesticated wild tree) is enough to cover both local and international demand. The county of Taita-Taveta, Kenya, hosts a baobab population about which nothing is known. The study was used to investigate the state, distribution and use of baobabs in a defined area in Taita-Taveta County. The results of the study were used to provide a scientific base regarding the above mentioned points to evaluate baobab potential for future development and use in the area.

A mixed methods approach was used. The sample area chosen covered an area of 2015 km² and followed the road from Voi to Taveta. The area was stratified into three strata, the Anthropogenically Affected Area (AAA), the National Park (NP), and the Sisal plantations (Sisal) based on land use intensity. To begin, a systematic stratified transect survey was done to map the baobab distribution using 49 transects each of 0.5x3 km in size. At the same time, the diameter at breast height (DBH) and other tree indicators were measured. A household survey (N=46) was done following the transect survey to gain an idea on the uses and distribution of baobab. In addition, twelve focus group discussions were done in six locations to evaluate whether there had been any change in population or values concerning baobab.

In total, 440 baobab trees were measured and recorded. The baobabs grew in a gradient in the sample area ranging from high to low baobab density. Two clusters were identified at opposite ends of the sample area, with the area in between showing a very scattered population. Both clusters showed rejuvenating populations. The main factors identified influencing baobab distribution were environmental factors, wildlife, human impact, and commercial value. The impacts were both positive and negative in nature, and influenced the baobab population differently depending on the location. Even though 27 different uses were identified most have been substituted. The area does however show a great potential for further development due to the interest of the people in new baobab products, baobab having the potential of being used as an emergency food during food scarce times (it is ripe during the "hunger gap"), and the relatively healthy and stable rejuvenating population.