

Project Update: January 2021

This project has accomplished following activities so for:

1. Ecological surveys were conducted in selected protected areas as well as in the communal land in the semi-arid regions of Tanzania.
2. Laboratory analysis was conducted.
3. Identified three major ethnic tribes (Gogo in Central region, Hehe in Southern region and Pare in Northern region) for the ethno-botanical importance assessment. This will focus on the use values and patterns of African baobab and their perceptions on the utilisation of the baobab tree in different semi-arid regions.
4. Developed the socio-economic data collection tools.
5. Published two research articles titled: (1) Demography of baobab (*Adansonia digitata* L.) population in different land uses in the semi-arid areas of Tanzania (2) Physicochemical Properties, Fatty Acid Composition, and the Effect of Heating on the Reduction of Cyclopropenoid Fatty Acids on Baobab (*Adansonia digitata* L.) Crude Seed Oil.

Current findings

This project, among other activities, investigated the physico-chemical properties and fatty acids profile of baobab crude seed oil collected from semi-arid areas in Tanzania and determined the effects of heating on the reduction of CPFAs. The results show that *A. digitata* crude seed oil was found to contain mainly 12 essential fatty acids and two different CPFAs. The most abundant fatty acids were palmitic acid, oleic acid, and linoleic acid in all the baobab population hotspots occurring in Tanzania. The major breakdown of CPFAs started at 200°C, and that would be the optimal temperature recommended for the refining process of the baobab crude oil. The study recommended, for the refining of the baobab oil at higher temperatures ranging from 250°C, as the best way of reducing CPFAs.

Next activities

1. To carry out the socio-economic data collection in the selected semi-arid region of Tanzania.
2. Preparation of the manuscript on the use values and patterns of baobabs products.