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## Uses of *Hyphaene* species known as mikoche and consumption constraints as food in Tanzania

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### Abstract

*Hyphaene*, commonly referred to as *mkoche* (plural *mikoche*) in Swahili, belongs to the Palmae (Arecaceae) family and is found in the coastal regions of Tanzania. The tree is used as a construction material for shelter, and its leaves are used to make woven products such as baskets, mats, and hats due to their strength and fibre length. In addition, the fruit of the *Hyphaene* tree is a good source of fibre, antioxidants, B-complex vitamins, essential minerals, monosaccharides, essential oil, and flavonoids, which are important compounds for human nutrition and health. Furthermore, *H. coriacea* produces edible nuts and palm wine in Maputaland coastal plains in KwaZulu-Natal, South Africa, and *H. coriacea* is known to produce edible oil from its nuts. However, despite its widespread presence, the economic potential of *mikoche* in Tanzania has yet to be fully unlocked. Therefore, a field survey will be conducted in the Pangani District in Tanga Region, Tanzania, to find and link the first-hand knowledge about the possibilities and constraints in producing, processing and utilising *mikoche* as a food source. The generalised linear model (GLM) and chi-square test will be used to predict the constraints of the production and processing of the *mikoche* in the Tanga region. Therefore, this study will highlight the need to invest in research and development towards innovative ways to exploit the economic potential of *mikoche* in Tanzania to sustain climate change and the growing demand for resource diversity, food and nutrition security. Moreover, documenting the uses and consumption constraints will help understand the natural resources systems, including product development for alternative food sources.

**Keywords:** Climate change, consumption constraints, food and nutrition security, *Hyphaene* species, natural resources