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<b>Project Title</b>	<b>Genetic diversity, conservation status and propagation of African Ivory Nut Palm (<i>Hyphaene petersiana</i> Klotzsch ex Mart.) in South Eastern Zimbabwe.</b>

### **Abstract**

African Ivory Nut Palm (*Hyphaene petersiana* Klotzsch ex Mart) is a non-branching straight tree belonging to the order *Arecales* of the palm family, *Arecaceae* distinguished by its fan-like leaves. The family has five sub-families and occur mostly in the tropics and subtropics due to their frost intolerance. *Hyphaene petersiana*, like other palm species, makes an important economic contribution to human livelihoods especially through the basketry industry. Leaf harvesting for craft has been shown to pose a great danger to the survival of *H. petersiana* since they are not given a chance to grow to maturity and produce seed. This could cause the weakening of the gene pool rendering the plant less capable to resist diseases or reduce its adaptive potential to the changing climate. Harvesting practices which prohibit the production of seed also affects the population structure of the plant resulting in absents of certain age groups. This is further complicated by the inherent dormancy of the palm seed which could last for several months or years prohibiting commercial germination. It is therefore important to develop a conservation strategy for *H. petersiana* starting off with the determination of the current genetic diversity present followed by identifying a suitable method for breaking seed dormancy to allow even germination of the plant. The present study seeks to map the spatial distribution of the species in the GLTFCA as well as determining its recruitment potential and the current off take levels. We are also going to estimate the standing biomass of the species as well as the genetic variation at molecular level for developing conservation programmes. Methods of breaking seed dormancy for the tree species are also going to be studied.