

# Assessment framework for conservation and management of legume plants in coastal East Africa

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The Fabaceae family, commonly known as the legumes, is one of East Africa's most important plant families. Many legume species are threatened by climate change and human disturbances. Therefore, enhanced forecasting of potential conservation areas for the persistence of these threatened species is required.

In a study published in *South African Journal of Botany*, researchers from the Xishuangbanna Tropical Botanical Garden (XTBG) of the Chinese Academy of Sciences and their collaborators tried to identify high priority conservation areas and better understand the eco-geographic adaptations, ranges, and conservation status of diverse Fabaceae taxa in coastal regions of East Africa.

By integrating species occurrence data with bioclimatic and topographic data, the researchers generated ecological niche models of eleven legume species. They used those models to assess the range shifts of the eleven species and identify taxa with the highest extinction threats.

By employing historical occurrence records and a MaxEnt modeling approach, the researchers computed for the first time the potential future distribution of threatened [legume](#) species in coastal East Africa under global climate change prediction models.

The results demonstrate that [climate change](#) will considerably influence most species distribution in the region, which may be described by differences in their responses to environmental variables and the spatial scale range changes.

"To our knowledge, this study is the first to appraise the distribution of threatened [species](#) within Fabaceae in coastal East Africa. Our findings provide a critical assessment framework for the conservation and management of Fabaceae in the region," said Harald Schneider of XTBG.

**More information:** Boniface K. Ngarega et al, Threatened Fabaceae taxa in coastal East Africa: Current and future modelled distributions and conservation priorities, *South African Journal of Botany* (2022).  
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