Predicting suitable areas for *Baccaurea angulata* in Kalimantan, Indonesia using Maxent modelling

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Abstract. *Gunawan, Sulistijorini, Chikmawati T, Sobir. 2021. Predicting suitable areas for* Baccaurea angulata *in Kalimantan, Indonesia Using MaxEnt Modelling. Biodiversitas 22: 2646-2653.* Baccaurea angulata Merr. or 'Belimbing Dayak' is an underutilized fruit indigenous in Kalimantan. This species potentially used as edible fruit and medicinal plant. Unfortunately, the forest conversion to oil palm and rubber plantations causes decreasing the habitat of *B. angulata.* However, little is known about the occurrences and suitable habitat of *B. angulata* in Kalimantan. This investigation is might be the first study report on predicting the distribution of *B. angulata* in Kalimantan using MaxEnt (Maximum Entropy). The results show that four variables namely solar radiation in October, altitude, precipitation of warmest quarter, and gloslope are significant factors determining *B.angulata's* suitable habitat. The location of suitable habitat for *B. angulata* is accordant with the real present distribution. The extent of potentially suitable area was significantly larger than the present occurrence of *B. angulata* in Kalimantan. The highest suitable areas identified in this study covered West Kalimantan and South Kalimantan. They included parts of SB (Sambas), LD (Landak), SG (Sanggau), SK (Sekadau) and BK (Bengkayang) of West Kalimantan Provinces, and TL (Tanah Laut), BN (Banjar) of South Kalimantan Provinces. The MaxEnt model performed better than random method with an Area Under Curve (AUC) value of 0.937 and it was statistically significant. It indicated that MaxEnt model was highly accurate and informative for habitat suitability of *B. angulata*. The predicted model of suitable areas can be used for management, monitoring, cultivation and future conservation of *B. angulata*.

Keywords: Phyllanthaceae, Kalimantan, habitat suitability, conservation, modeling