**DISTRIBUTION AND PREDICTING SUITABLE HABITAT**

**FOR BELIMBING MERAH (*Baccaurea angulata* Merr.) IN KALIMANTAN**

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**Abstract**

The information about distribution and habitat preferences of plant were important and useful for data collection of plant populations, recording the diversity of flora and its habitat, and its development for further purpose. *Baccaurea angulata* Merr. (belimbing merah) is an underutilized fruit indigenous in Kalimantan. This species potentially used as edible fruit and medicinal plant. Unfortunately, the forest conversion to oil and rubber plantations cause decreasing the habitat of *Baccaurea angulata.* The objectives of this research were to provide information about locations of *Baccaurea angulata* trees in Kalimantan and predicted the suitable habitat for *Baccaurea angulata.* Exploration was carried out in four provinces in Kalimantan island, consist of West Kalimantan, East Kalimantan, Central Kalimantan, and South Kalimantan. The geographical distribution was mapped using ArcGIS version 10.3, while the suitable habitat was predicted using Maxent (Maximum entrhopy) version 4.01, with presence/absence occurence data and environmental variable data. The environmental variable include precipitation, slope, solar radiation, temperatur minimal, temperatur maximal, temperatur average, water vapor pressure, wind speed, and bioclimate. The result showed that *Baccaurea angulata* trees were mostly located in West Kalimantan, especially in Ngabang region. This species grows well in the low land 45 m - 170 m above sea level, with soil pH 6-6.5. The AUC (the area under the ROC curve) value of Maxent model was 0.964 and it was statistically significant.

It indicated that Maxent model was highly accurate for habitat suitability of *Baccaurea angulat*a.

solar radiation and precipitation became important environmental variables for constructing Maxent model. The location of suitable habitat for *Baccaurea angulata* is accordant with the real present distribution, around of the current distribution and distributed in four provinces with the largest area in west Kalimantan. The predicted model of suitable habitat can be used for management, monitoring, cultivation and conservation planning of *Baccaurea angulata*.

Key word : *Baccaurea angulata*, distribution, Maxent model, map, conservation.