

Estimating wildlife occurrence in Peninsular Malaysia using GWR4

ABSTRACT

The Geographically Weighted Regression (GWR) is an example of spatial analysis that used spatial non-stationarity as variables and explains it in details in terms of location. In a two different forest areas; undisturbed and disturbed forest in Peninsular Malaysia, we studied the relationship between wildlife richness with landscape factors as explanatory variables. A total of 120 camera traps were installed at both forest areas from May 2015 to March 2016. We found that undisturbed forest was high in wildlife richness compared to disturbed forest with two from 16 mammals species were listed under endangered species in the IUCN red list. We concluded that wildlife is more abundant in the undisturbed forest due to the richness of biodiversity from plants and animals. The GWR gives a good model between the relationship of wildlife occurrence and landscape features. In addition, information obtained from the AICc value could help stakeholders and responsible authorities to maintain the diversity of wildlife species as attributed by the landscape factor importance.

Keyword: Geographically Weighted Regression (GWR); Spatial nonstationarity; Wildlife; Peninsular Malaysia