

Hazard-rating assessment of roadside trees at UPM using geospatial tool.

Abstract

Roadside trees provide benefits in the form of green landscape, human health, storm-water management, carbon storage and etc. However, they are potentially hazardous to their surroundings. Hence, there is a need to evaluate these trees as to whether they are hazardous or not. Hazard-rating assessment in the context of urban trees is the evaluation of the hazard of trees and how likely they are to fail as well as how severe in terms of damage that they could cause to their surroundings. In this study, roadside trees hazard rating was assessed automatically using a customised ArcMap TM application using Visual Basic for Applications (VBA), known as UPM-Malaysian Urban Trees Information System (UPM-MUTIS), developed by Faculty of Forestry, UPM. The study is to determine the capabilities of UPM-MUTIS in generating hazard-rating assessment. The study area covered part of UPM's academic zone. Result depicted that out of 909 trees assessed, 99.8% (907 trees) were categorised as 'Medium' hazard rating and no trees with 'Low', 'High', and 'Severe' hazard rating. Upon deriving hazard-rating assessment, abatement activities were subsequently proposed in which was mainly various degrees and types of pruning. This paper details out the hazard-rating assessment process of roadside trees and the succeeding abatement activities proposed at the study site.

Keyword: Tree hazard rating assessment; GIS; Urban trees.