

UNIVERSITI TEKNOLOGI MARA

**MALAYSIAN ROADSIDE TREE
SPECIES SELECTION IN URBAN
SETTING FROM LANDSCAPE
PRACTITIONERS PERSPECTIVES**

RAMLY BIN HASAN

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ABSTRACT

Roadside trees as a part of urban green infrastructure have the potential to cope with some of these problems in urban environment, as they can provide an array of services such as shade provision and aesthetic creation. Unfortunately, roadside trees are also acknowledged to render disservices. Damaged road surface, pedestrian walkway and underground utilities are few instances of this. Granting that the types of services and disservices vary according to tree species, the selection of tree species is hence crucial: the selection of the wrong tree species to be planted at the wrong place can lead to significant environmental, social and economic consequences. This is where the role of landscape practitioners in local authority comes into play as they are authorised in the decision making of tree species selection. In 2014-2016, statistics reveal high public complaints of many roadside trees problems, which not only leave the local authorities worried, but also require them to yearly spend more than hundreds of thousands of Ringgit Malaysia, paying public compensations and maintenance costs. This thereby calls this research to develop a Malaysian roadside tree species selection model for reference to the local authorities. To do so, four objectives were developed of (a) To investigate public complaints related to urban roadside tree species; (b) To determine additional attributes in urban roadside tree species selection; (c) To examine the relationship between additional and similar attributes in landscape practices and (d) To recommend additional attributes in Malaysian Roadside Tree Species Selection Model, are put forth by this research, which employs mixed methods analysis consisting of both qualitative and quantitative approaches. An In-depth interview is conducted in four selected local authorities namely Kuala Lumpur City Hall, Petaling Jaya City Council, Selayang Municipal Council and Subang Jaya Municipal Council. Document review is also conducted to identify species with roadside tree problems. Apart from interview and document review, survey questionnaire is also distributed to 764 registered landscape architects with ILAM. The appraisal of landscape practitioners for each of the attributes is assessed through five ordinal values or Likert scale. The findings reveal eleven (11) additional attributes of trend, landscape policies, personal preference, knowledge, skill, experience, expertise, location, space, framework and plan, and themes, to influence the selection of roadside tree species in urban areas. *Pterocarpus indicus* (Angsana), *Acacia sp.* (Akasia) and *Peltophorum pterocarpum* (Batai laut) are found to be the three species with the most problems complained. The tree problems addressed by public complaints include tree fall, brittle branches, obstructed visibility, dead leaves and debris on the road, heavy branches obstructing the traffic, old and dead trees, debris obstructing drainage system, near house and leaning tree trunks. It is hoped that the findings which can offer a reliable reference to Malaysian local authority, would help to facilitate landscape practitioners in the selection of roadside tree species. Lastly, a Malaysian roadside tree species selection was developed as a guidance to landscape practitioners especially for local authorities, landscape consultant and landscape contractors. The model also can be used for academic purposes and benefits to the students and academician.

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