Environmental Engineering and Management Journal *January 2021, Vol.20, No. 1, 97-108*
http://www.eemj.icpm.tuiasi.ro/; http://www.eemj.eu

"Gheorghe Asachi" Technical University of Iasi, Romania

PERCEPTION OF THE PUBLIC TOWARDS SUSTAINABLE TECHNOLOGY FACILITIES IN REST AND SERVICE AREAS IN MALAYSIA

Shafie Rahim, Nur Izzati Abdul Rahman, Chua Hong Neng, Muhamad Azry Khoiry*

Department of Civil Engineering, Faculty of Engineering and Built Environment,
Universiti Kebangsaan Malaysia, 43600 Bangi, Malaysia

Abstract

In this modern era, sustainable development has become more important as the world resources are diminishing. The emergence of issues such as insufficient landfills, diminishing usable clean water, pollutions, and greenhouse effect has made the development of sustainable elements more vital. A rest and service area (RSA) particularly can be upgraded to a sustainable area by installing sustainable technologies. Therefore, the current study aims to apply sustainable technology facilities in RSAs. This paper used a holistic sustainable facilities approach on six main components: waste management, compost, biogas, rainwater harvesting systems, green roofs, and green materials. A survey was conducted using impromptu random sampling to obtain public perception on sustainable technologies to be implemented in RSAs via Google Form. This research measured public preference for each technology and the effect of the implementation of these sustainable elements towards economic, social, and environmental factors. From the six elements, 81.52% of the respondents choose recycle or waste management as the most suitable sustainable element to be implemented in RSAs. Furthermore, 90.89% of the respondents admitted that the most affected factor among sustainable elements if sustainable facilities are implemented in RSAs is the environment factor. This shows that most of respondents aware that the sustainable facilities implemented to prevent the environmental issues. The collected results in this paper can serve as a preliminary result for further research and can be used as a recommendation for developers.

Keywords: public perception, sustainable development, sustainable facilities, sustainable technologies

Received: November, 2019; Revised final: July, 2020; Accepted: July, 2020; Published in final edited form: January, 2021

*Author to whom all correspondence should be addressed: e-mail: azrykhoiry@gmail.com; Phone: +60175733421