



EXPLORING ENABLERS AND BARRIERS OF VERTICAL GREENERY IN SRI LANKAN BUILDINGS

M.D.W.Peiris, T. Jayawickrama and S.D.A. Soorige*

University of Moratuwa, Sri Lanka

dumindu.soorige@gmail.com

Rapid Increase of building stocks in the world today has created a significant negative impact to the natural environment. Construction of buildings and other civil engineering structures consumes the natural environment and contribute for the pollution in a considerable amount. In Sri Lankan context also this issue is developing gradually specially in urban areas and with the development of new cities. Designing the buildings to reduce the environmental impact by integrating different ecofriendly initiatives has been identified as a solution to mitigate the environmental impact of rapid urbanization. Vertical greenery can be identified as such ecofriendly initiative and it is worthwhile to study about the applicability of the concept. Therefore, study focuses on exploring enablers and barriers of vertical greenery in Sri Lankan context. A comprehensive literature review was carried out to explore the importance of the research area. Eventually, a set of enablers and barriers were identified for vertical greenery in Sri Lanka. A quantitative approach was adopted whereby thirty one questionnaires were distributed among property owners, facilities managers, architects, landscape designers, operational managers, constructors and members representing government body regarding vertical greenery in Sri Lanka. Collected data of the questionnaire survey was analyzed using one sample t-test in SPSS statistical software packages and Relative Importance Index (RII) technique to identify most significant enablers and most critical barriers of vertical greenery. Accordingly, the total number of ten enablers and total number of eleven barriers were identified. According to the analysis most significant enablers of vertical greenery have been identified as restoring the biodiversity into urban building and vertical greenery helps to reduce carbon dioxide while increasing oxygen to the environment. Further, lack of awareness of the benefits and performance of vertical greenery systems and lack of information on plants that will perform well on vertical facades in Sri Lanka have been identified as most critical barriers of vertical greenery.

Keywords: *Vertical Greenery, Enablers, Barriers, Sri Lanka*