ASSESSING THE SUSTAINABILITY OF URBAN ECOSYSTEMS: AN INNOVATIVE APPROACH

Didem DİZDARoğlu, PhD. Student
Queensland University of Technology, Australia
d.dizardoglu@qut.edu.au,

Tan Yiğitcanlar, Senior Lecturer
Queensland University of Technology, Australia
tan.yigitcanlar@qut.edu.au

Les Dawes, Associate Professor
Queensland University of Technology, Australia
l.dawes@qut.edu.au

At the turn of the millennium, the Earth’s human population has reached unprecedented levels and its natural resources are being pushed to the limit. Thus, cities are focused on sustainable development and they have begun to develop new strategies for improving the built environment. Sustainable development provides the best outcomes for the human and natural environments by improving the quality of life that protects and balances the ecological, social and economic values. This brings us to the main point: to build a sustainable built environment, cities need to redesign many of their technologies and planning policies within the context of ecological principles. As an environmental sustainability index model, ASSURE is developed to investigate the present environmental situation of an urban area by assessing the impacts of development pressure on natural resources. It is an innovative approach to provide the resilience and function of urban ecosystems secure against the environmental degradation for now and the future. This paper aims to underline the importance of the model (ASSURE) in preserving biodiversity and natural ecosystems in the built environment and investigate its role in delivering long-term urban planning policies.

KEY WORDS: Sustainable Urban Ecosystem, Environmental Sustainability, Indicator-based Sustainability Assessment, Environmental Sustainability Index.