Urban Green Infrastructures as an Integrative Approach for Sustainable City Planning and Development in Sri Lanka

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Sustainable urban planning and development denotes the quality improvement of life through engineered environmental, social and economic constituents concerning the life standards of future generation. Population density within Sri Lanka's capital; Colombo, is higher as 18,900 populations per km^2 and has experienced 0.09 – 4.4ºC urban heat island effect during 2012. Since land use has been changed periodically by urbanization and industrial expansion, unplanned grey infrastructures have resulted downgraded environment with sudden natural calamities which challenge livability in Colombo city. Hence, the objective of this paper is to review the significance, present status and future perspectives of urban Green Infrastructure (GI) as an integrative approach for sustainable city planning and development in Sri Lanka. GIs are multi-functional approaches for ecological equilibration and sustainability in urban context. Rain gardens, living roofs, urban forestry and vertical gardens are few of GI that has widely been implemented worldwide. Green walls are superior in temperature reduction, air purification and energy conservation at building micro-climate. Most developed countries are strict with national planning policies concordance with environmental protection agencies, sustainable development goals and ISO 31720 standard for resilient and sustainable cities. Sri Lankan government recently paid attention on sustainable urban development with multi model transport hubs, metro Colombo urban development projects as integrated flood management systems, rehabilitation and implementation of urban public facilities. Positively, urban development authority leads future development strategies counting landscaping, traffic impact assessment and water management systems raising social awareness. However, integrated holistic city – scale approaches of GI in urban planning should be encouraged by local government through mandatory policies ensuring socio – economic benefits beside cling to certain notions.

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