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**Remote Sensing of Urban Ecological Infrastructure: a review of current approaches using multiple sensors**

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The semi-aquatic, aquatic and green spaces of Southeast Asian cities, such as Yangon and Ho Chi Minh, act as ecological infrastructure for these rapidly emerging megacities. The cultural and natural biodiversity integrated within urban ecological infrastructure is a key to metropolitan sustainability in the face of climate change, economic instability and urbanisation pressures. Such ecological infrastructure provides diverse ecosystem services and is heavily utilised by local urban populations in Southeast Asian cities. However, rapid urban development has left stream systems, urban agriculture, wetlands and urban forests as fragmented spaces vulnerable to future development. Better knowledge of the extent and structure of ecological infrastructure is needed to safeguard such infrastructure in the context of rapidly growing urban environments. This paper addresses this issue by reviewing methods for mapping and monitoring such ecological systems through the integration of images from multiple sensors. The paper also assesses the feasibility of such technology for generating up-to-date maps of ecological infrastructure that inform urban planning. Comparison of various sensors will be discussed in relation to their ability to reveal different aspects of ecological infrastructure. Such sensors include high-resolution multispectral sensors (such as Landsat-8, SPOT-5, ALOS AVNIR-2, GeoEye-1 and WorldView-2), wide swath medium resolution sensors (such as Terra and Aqua MODIS, S-NPP VIIRS) as well as microwave sensors (such as ALOS PALSAR and the recently launched ALOS-2 PALSAR-2). The synergistic combination of data from multiple sensors can provide more reliable and accurate information especially when classifying complex systems such as ecological infrastructure. The potential advantages of integrating information from multiple sensors include improved timeliness, complementarity, cost-effectiveness and better certainty when compared to information from single sensors.