

ENVIRONMENTAL MANAGEMENT OF A COASTAL URBAN AREA: THE ECOSIM PROJECT

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EXTENDED ABSTRACT

Environmental management of a coastal area addresses various environmental domains and requires for an integrated, system-based approach that can handle the inter-relations and the dynamics of the environmental components of interest. In the present paper, the greater Athens area is serving as the test-bed for an integrated environmental management application that simultaneously addresses air quality, coastal water quality and ground water quality issues. This application was developed in the frame of the ECOSIM EU project¹, and integrated monitoring and simulation modelling for environmental decision support in urban areas. The project developed and demonstrated an environmental decision support system based on a modular and distributed client-server architecture using wide-area network technology and the Internet to connect clients, monitoring networks, and high-performance model servers. Traffic generated air pollution including photochemical smog, coastal water quality, and groundwater were the environmental application domains, analyzed by a set of state-of-the-art simulation models with a multi-media user interface. In this paper the system set-up, pilot operation and evaluation for Athens is presented. The simultaneous treatment of three environmental domains provides with the opportunity to draw some interesting results on the integrated environmental management and decision making concept, and its applicability towards a better, sustainable urban development paradigm.

Key words: environmental management, air quality, coastal water quality, ground water quality

¹ <http://www.ess.co.at/ECOSIM>