



Relevance of the land use changes related to a megacity development in a Colombian river basin

Alicia García-Arias (1), Claudia Patricia Romero Hernández (1,2), and Félix Francés (1)

(1) Research Institute of Water and Environmental Engineering, Universitat Politècnica de València (UPV), Valencia, Spain (algarar2@upv.es), (2) Institute of Environmental Studies, Universidad Nacional de Colombia, Bogotá, Colombia (cpromero@unal.edu.co)

A megacity development is a main driving force for land uses changes. Population in these megacities usually rise depending on some or all of the natural resources related to the occupied area and, among them, water is a pivotal requirement. On the other hand, land use changes determine the catchment hydrology and, in consequence, its management. The better knowledge on land uses cover distribution and characteristics, the higher capabilities to increase the accuracy of hydrological predictions and the efficiency of water management. This study aims to describe the land uses changes occurred during the recent expansion of the megacity of Bogotá (Colombia) and to understand the expected changes. In addition, we propose the base for the consideration of this land use changes in the TETIS distributed hydrological modelling approach. The discussion focus on the necessity of considering this kind of scenarios in hydrological modelling for a responsible management of the water resources.