A Watershed Characterization Method for Hydrological Simulations

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Abstract: The increasing rate of urbanization and population rise in the Philippines places an increasing demand on the basic services of the different government agencies. Managers desire better ways to incorporate geospatial information in their decision-making processes. One of the more common applications of remote sensing in the Philippines is in the field of disaster management, particularly in the study of extreme rainfall effects.

Remote Sensing (RS) applications to hydrological problem solving have successfully transitioned from being experimental to operational in the last couple of years, and information gathered through these technologies can facilitate water resource procedures. Configurations from RS imagery can be translated into a deterministic distribution of input data over a wide area on a pixel-by-pixel basis. This paper presents the implementation of a modified evidence-based classifier in watershed characterization and the integration of satellite-derived information from Remote Sensing (RS), and Geographic Information System (GIS) visualization and simulation capabilities in improving hydrologic estimation processes.

Keywords : Classification, Integrated Remote sensing and GIS analysis, Flood/Drought