

Utilization of satellite-based Digital Elevation Model (DEM) for hydrologic applications: a review

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ABSTRACT

Digital elevation model (DEM) derived conventionally from topographic maps and space borne satellites will provide various evidences about the change in earth features. It is one of the most fundamental data source of topographical relief information and delineate watershed boundaries which is being widely applied in numerous hydrological studies. A significant amount of work has been done to address the limitation and uncertainties of DEM. This review article aimed to bring all-inclusive considerations of DEM, i.e., derivative DEM sensors, types, accessibility, cost, horizontal & vertical accuracy and cell resolution. Based on evaluation this study would offer a good assistance to the research community and users for the implication of DEM services in appropriate hydrological models to avoid the ambiguities of modeling.

KEYWORDS:

Digital Elevation Model (DEM); Hydrologic applications; Topographic maps