Research on Water-related Disaster Database

Abstract: The goal of this research is to develop a database to store hydro-climate data, damage, land use, and other socio-economic data and to demonstrate an application example of the database. We have developed three sub-systems. One is “Knowledge Mining System (KMS)” that intends to systematically store and share lessons learned from past disasters for an internal use. Second is the other version of KMS for public use. Third is a damage dataset that contains flood inundation depths, economic damages, the numbers of households and businesses, agricultural areas and other property data in meshes for three river basins. These are on an already-operating “hydrological material integrated database” server except for KMS public use version. We have demonstrated an application example of the damage dataset by showing the difference between two estimated economic damages by the Japan’s flood project economic assessment annual and ECLAC Disaster Impact Calculator.

Keywords: Knowledge Mining System, inundation depth, flood control project economic assessment manual, ECLAC Disaster Impact Calculator