

ONLINE FLOOD RISK FORECAST BY USING HYDROLOGICAL INFORMATION SYSTEM AND RADAR IMAGES

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Abstract

Flood is a natural phenomena which can happen at any time and anywhere resulting in damages to , infra-structures, environment and human-life . Several kinds of flood control and flood mitigations have been studied and implemented to alleviate flood problems and reduce flood disaster. Flood monitoring and warning is one of non-structural flood measures to reduce flood disaster. This study proposes a new concept for flash flood monitoring and warning by using a real time hydrological data to provide a real time flood warning to all people. A real-time hydrological information system was designed and developed in the study. The system was designed to be capable to provide information immediately which is necessary for flash flood monitoring and warning. Bangkok area was selected as a case study due to its availability of data and its frequent flood problem. The most important variable causing flood in this particular case is rainfall. Flood risk assessment due to rainfall was also conducted in the study. Finally, real time hydrological information system was tested and operated. Presently, any people who has mobile phone can access the system conveniently, when provides not only on-line real time information but also flood risk information which is useful for real time decision making.