

ADVANCEMENT OF SATELLITE RAINFALL APPLICATIONS FOR HYDROLOGIC MODELING WITH EMPHASIS ON FLOOD MONITORING

Fact Sheet

Project Information

FLOODSAT

Grant agreement ID: 277183

Status
Closed project


Start date
1 April 2011

End date
31 March 2014

Funded under
FP7-PEOPLE

Overall budget
€ 75 000

EU contribution
€ 75 000

Coordinated by
MIDDLE EAST TECHNICAL
UNIVERSITY
 Turkey

Objective

"Floods are the most widespread and frequent natural disaster responsible for significant loss of lives and property each year. The European Environmental Agency estimated that floods in Europe between 1998 and 2002 caused about 700 deaths, the displacement of about half a million people and at least 25 billion Euros in insured economic losses. As such, one of the four priority areas in FP7 has been identified as triggering factors and forecasting and mitigation strategies for natural hazards. Flood early warning systems are the most effective way to mitigate flood induced hazards. The reliability of such systems depends on the availability of timely and good-quality rainfall estimates. Although many of the regions in Europe are equipped with dense rain gauge networks, the station density varies greatly from country to country, which can affect the quality of the model simulations. Hence exploiting

alternative ways, such as satellite-based products, for estimating rainfall having continuous spatial coverage and short latency will be potentially beneficial for mitigating flood risks.

The overall goal of this project is to “advance the utility of satellite-based rainfall estimates for hydrologic modeling, specifically for flood monitoring”. The expected outcomes of this research are: 1) a large database of dynamic and static datasets for the Western-Black Sea basin, Turkey, 2) A methodology for adjusting satellite-based rainfall estimates, 3) intercomparison study revealing the degree of agreement between rain gauge and satellite-based rainfall products over the study area before/after the adjustment, 3) A hydrologic model that is implemented for the study basin using rainfall estimates from rain gauges and existing/adjusted satellite rainfall products, 4) An improved methodology for calibration and evaluation of hydrological models, 5) An analysis providing insights into the value of existing/adjusted satellite-based rainfall estimates for streamflow simulations."

Field of science

/social sciences/sociology/governance/crisis management

/social sciences/sociology/governance/crisis management/flood risk management

/natural sciences/earth and related environmental sciences/physical geography/natural disaster

Programme(s)

Topic(s)

Call for proposal

FP7-PEOPLE-2010-RG

Funding Scheme

MC-IRG - International Re-integration Grants (IRG)

Coordinator



MIDDLE EAST TECHNICAL UNIVERSITY

Address

Dumlupinar Bulvari 1
06800 Ankara

 Turkey

Activity type

**Higher or Secondary
Education Establishments**

EU contribution

€ 75 000

[Website](#) 

[Contact the organisation](#) 

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