

GIS FLOOD DECISION SUPPORT TOOL AFTER DAM BREAK (ARMENIAN TEST CASE)

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Abstract:

In the framework of the international project Alliance for Disaster Risk Reduction, with acronym: ALTER, funded under DG ECHO external line funding schema, international team from Cyprus, Greece, Armenia and Bulgaria are having as main goal to create hazard maps for vulnerable areas in Armenia where potential dam breaks and flood events afterwards are possible. The presented work will show an approach for dam break analysis with potential flood zones in the downstream of the dam. The calculated affected zones and all related civil protection measures are designed within an open source web GIS tool developed for the project needs, which architecture and implementation steps will be demonstrated as work in progress. All results and calibration measures are done on the territory of the study area Geghi reservoir located in Syunik, the southernmost province of Armenia. The reservoir is situated on the Geghi river, the left-bank tributary of the river Voghji. The maximum water level discharge occurs during the spring. Due to the high altitude nature of the area, snowmelt increases gradually as does the level of the river and the reservoir. Thus results in high danger for the dam stability.

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