5th Drin Stakeholders Conference

FLOODS IN THE PRESPA SUB-BASIN, THEIR OCCURRENCE, EFFECTS AND RISKS

Anita Kodzoman, UNDP Skopje

21 – 22 November 2017
Podgorica
Historical data

Three biggest floods in 1942, 1962 and 1979 in Golema reka (river) basin

In 1942-1943 и 1963 (November) floods cause by high level of Prespa Lake (851.93 м) affecting number of villages (Nakolec, Asamati, Ezerani, Perovo) and large percentage of arable land

Last flood in 2015

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Use of IT Technology - Hydrologic Engineering Centers River Analysis System (HEC-RAS), US Army Corps of Engineers

- User-friendly interface
- Different modules for hydraulic analyses (stationary flow (1D), non-stationary flow (1D and 2D), transport of sediment, water quality
- Data storage and management
- Graphical and tabular presentation of data
- RAS Mapper – providing for GIS mapping of data from the hydraulic analyses

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Hydraulic modeling of Golema River and Istockka River

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Assessment of the potential damages from floods (Golema and Istockka Rivers)
Scenario I – Golema reka
(Q100=65 m³/s)

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Scenario 2 – Istockka reka

Q100=47 m3/s

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Scenario 3 - Simultaneously for both rivers, 2630ha

- Average losses per ha flooded areas ~ 2,000 EURO/ha (agriculture & infrastructure)
- Potential losses of a flood occurring 1/100 years (1% probability of an occurrence) ~ 6.5 mill USD (10% BDP for the Municipality of Resen)

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Scenario – 4 Floods caused by smaller mountain rovers – Brajcinska reka

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Operational Plan for Flood Prevention in the Municipality of Resen

• Regular maintenance of riverbeds and drainage channels;
• Construction of preventive structures on critical areas for flooding;
• Finalization of the rain water collection system in Resen;
• Preparation of technical documentation for resolving the problems with open channels;
• Public awareness activities and education;
• Targeted education of farmers for good agricultural practices that will prevent erosion and will decrease the risk of flooding;
• Mainstreaming flood risk assessment (and other risks) into land use and urban plans;

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anita.kodzoman@undp.org
dimitar.sekovski@undp.org

THANK YOU FOR YOUR ATTENTION

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