



ACTIVITIES ON FLOOD RISK MANAGEMENT AND CLIMATE CHANGE ADAPTATION IN THE SAVA RIVER BASIN

Workshop on

**WATER-FOOD-ENERGY-ECOSYSTEMS NEXUS ASSESSMENT IN
THE SAVA RIVER BASIN**

4-6 March 2014, Zagreb

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ISRBC Secretariat

Protocol on Flood Protection to the FASRB

The likely consequences of climate change on the water regime on the Sava River Basin and the need of effective adaptation measures are recognized.

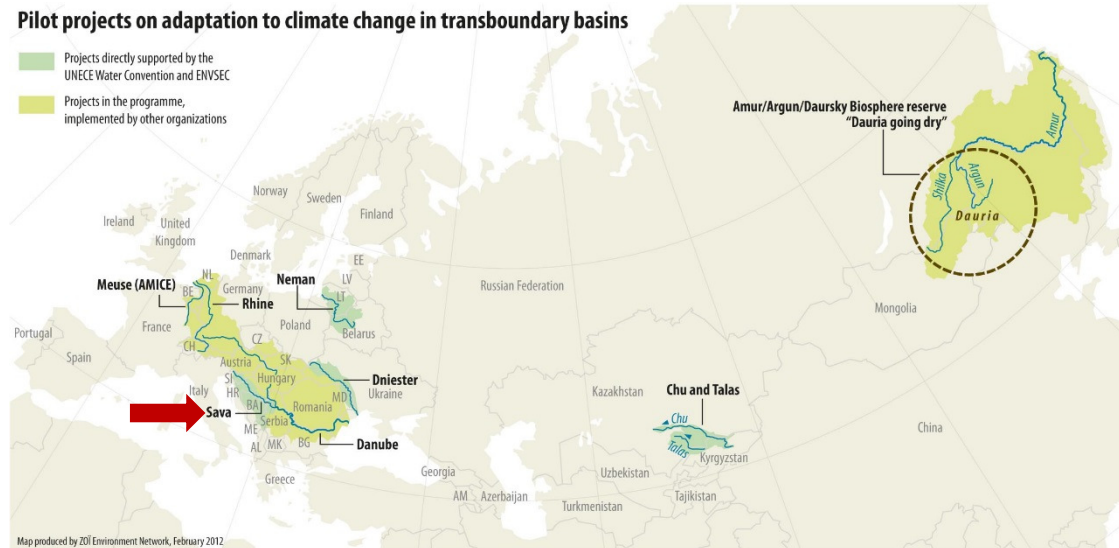
Common tasks of the Parties:

- I Program for development of the Flood Risk Management Plan in the SRB
- II Preliminary Flood Risk Assessment
- III Flood maps
- IV Flood Risk Management Plan in the SRB
- V Flood forecasting, warning and alarm system in the SRB
- VI Exchange of information significant for sustainable flood protection
- VII Implementation of all measures and activities of mutual interest

UNECE project

Building the link between flood risk management planning and climate change assessment in the Sava River Basin

Completed in December 2013



A1 Report on already completed or ongoing FRM planning projects in the SRB

A2 Report on legislation related to FRM planning and climate change adaptation (transboundary and national)

A3 Report on meteorological part of development of climate projections for the SRB

Report on climate change impact on flood discharge of the Sava River

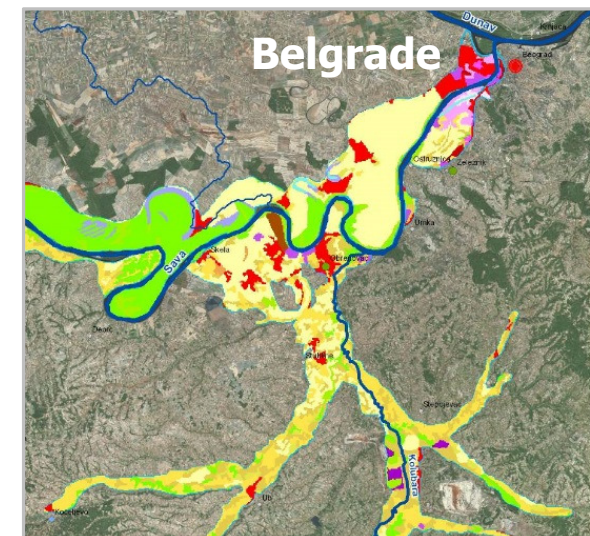
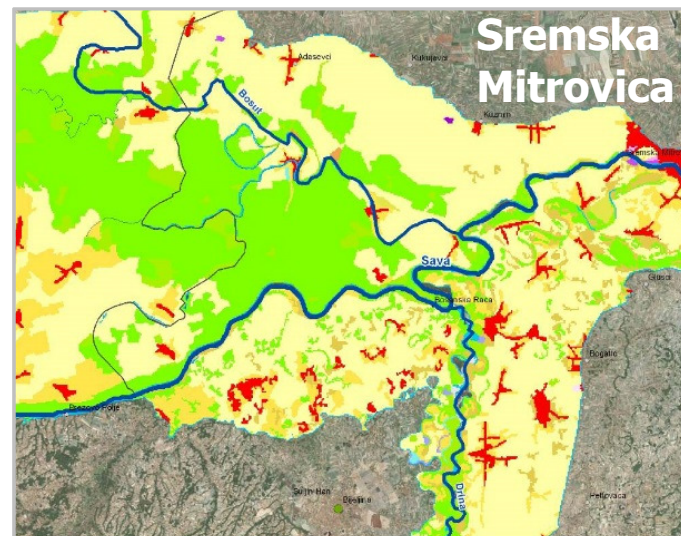
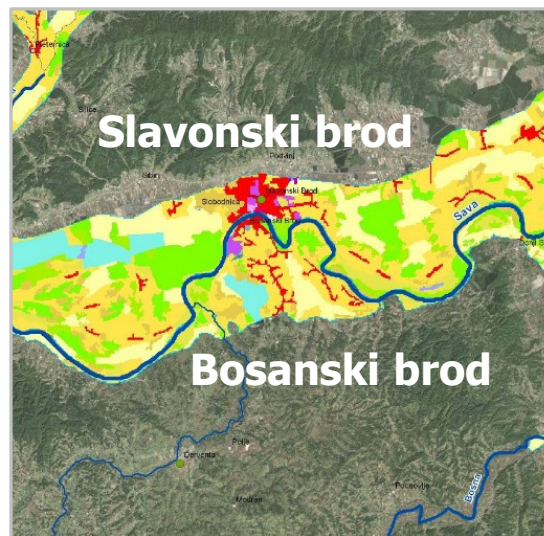
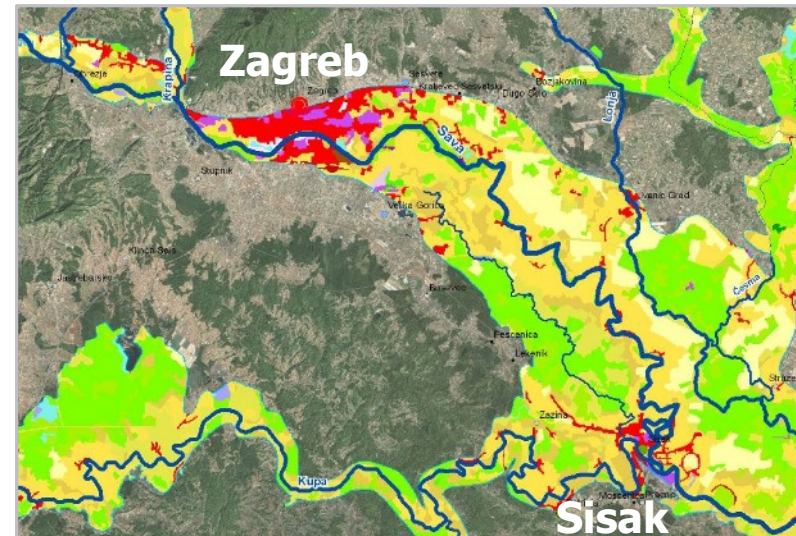
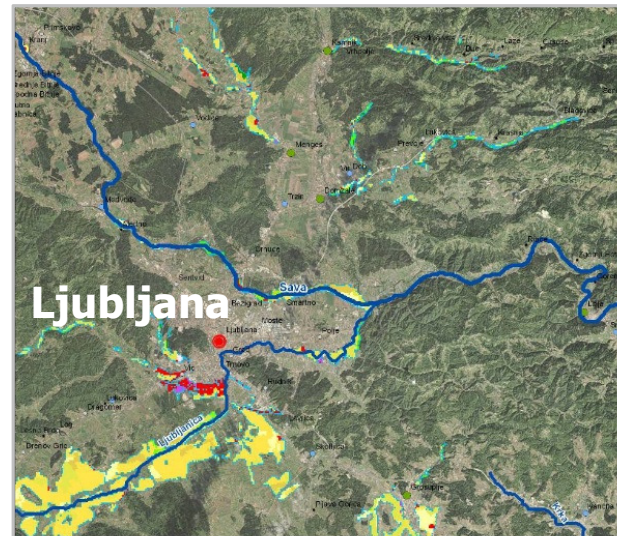
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A4 Report on initial flood vulnerability assessment in the SRB

Landuse - level3

-  Airports
-  Beaches, dunes, sands
-  Broad-leaved forest
-  Complex cultivat. patterns
-  Coniferous forest
-  Construction sites
-  Continuous urban fabric
-  Discontinuous urban fabric
-  Dump sites
-  Fruit trees and berry plantat.
-  Green urban areas
-  Industrial or commercial units
-  Inland marshes
-  Land occupied by agriculture
-  Mineral extractor sites
-  Mixed forest
-  Natural grasslands
-  Non-irrigated arable land
-  Pastures
-  Road and rail networks
-  Sport and leisure facilities
-  Transitional woodland-shrub
-  Vineyards
-  Water bodies
-  Water courses

(Corine land cover, 2000.)



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A5 Report on climate change adaptation measures for flood protection in the SRB

A6 (I) Program for development of the Sava Flood Risk Management Plan

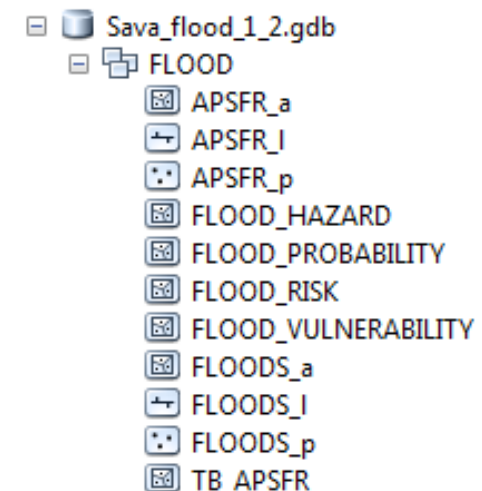
- Responsibilities of the Parties
- Mechanisms of the Plan development
- Holders of the particular activities
- Realisation deadlines



Review by the Seretariat & PEG FP
Adoption by the ISRBC

A7 Report on assessment of data and information needs for preparation of a joint FRMP for the SRB

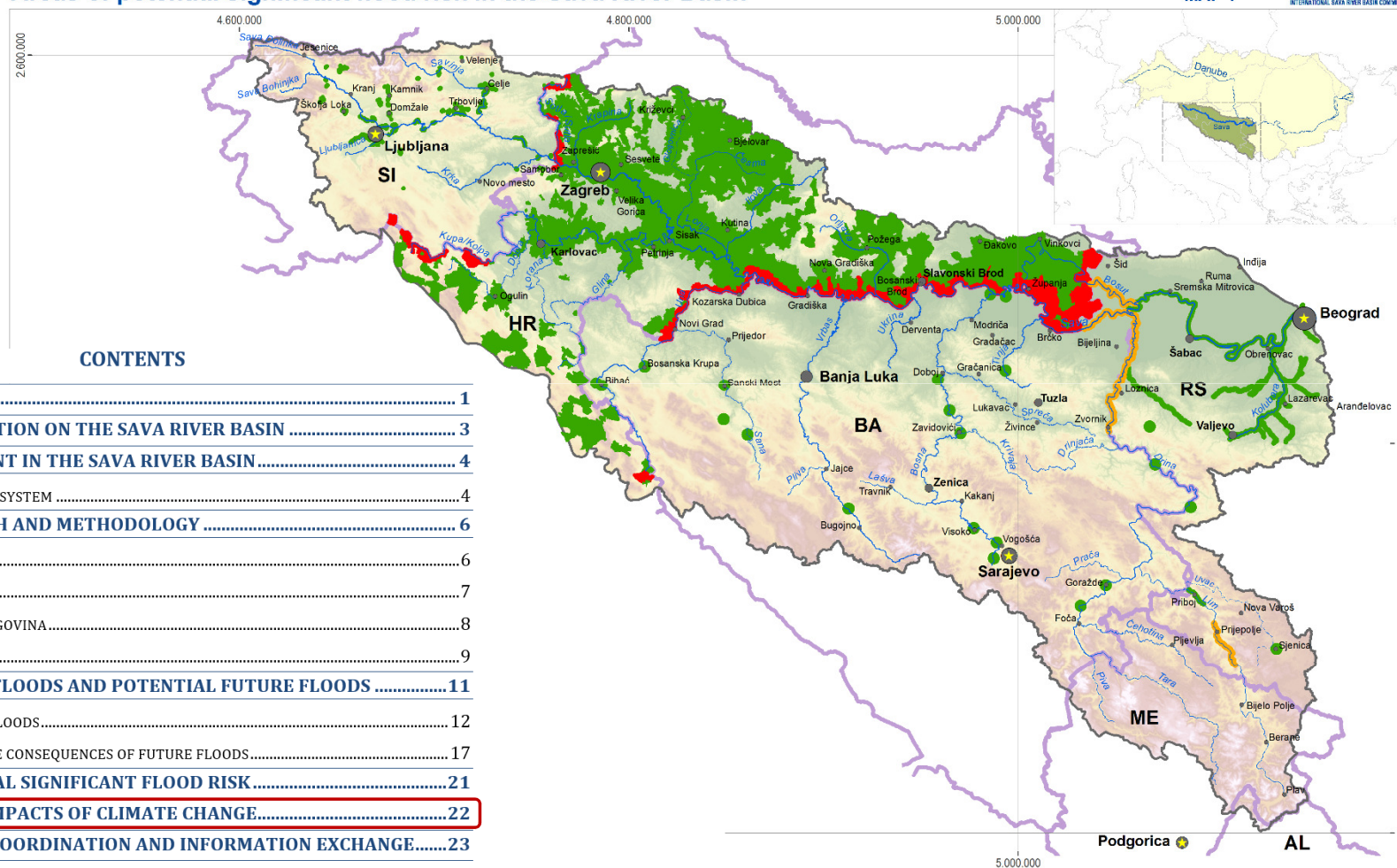
- Common geodatabase



II Preliminary Flood Risk Assessment

Areas of potential significant flood risk in the Sava River Basin

MAP 1



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PRELIMINARY FLOOD RISK ASSESSMENT FOR THE SAVA RIVER BASIN
Draft 4: Secretariat of the ISRBC, February 2014

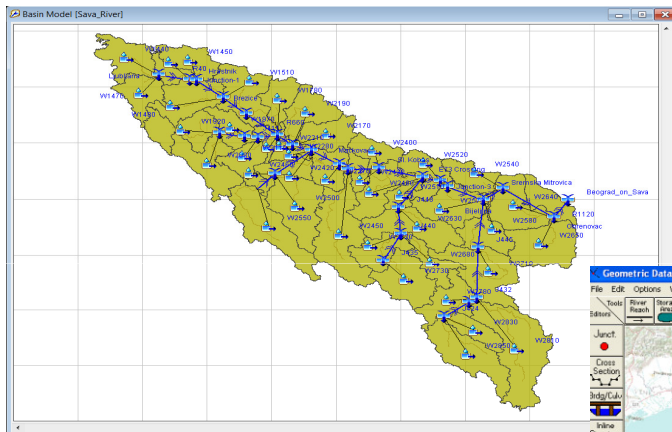
Flood related modelling

UNECE/ENVSEC project proposal

Improving flood risk management in the SRB by enhancing the hydrologic model for better forecasting and planning

Hydrologic model

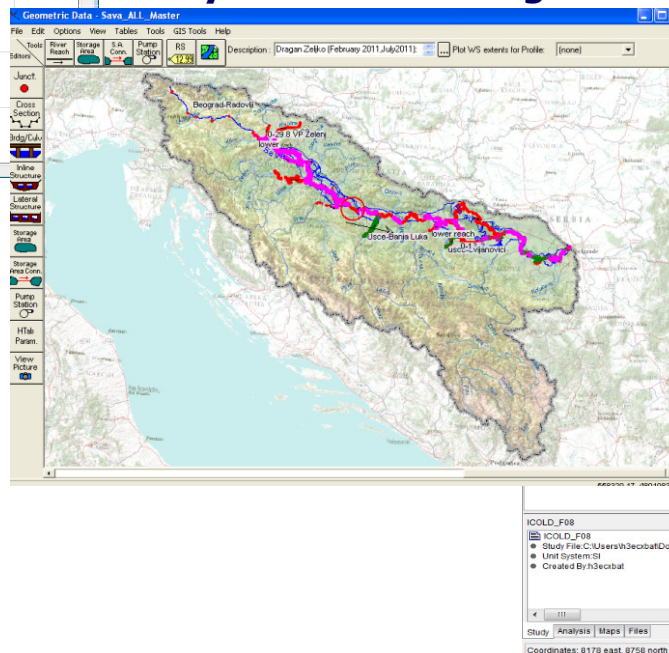
Hydrologic Modelling



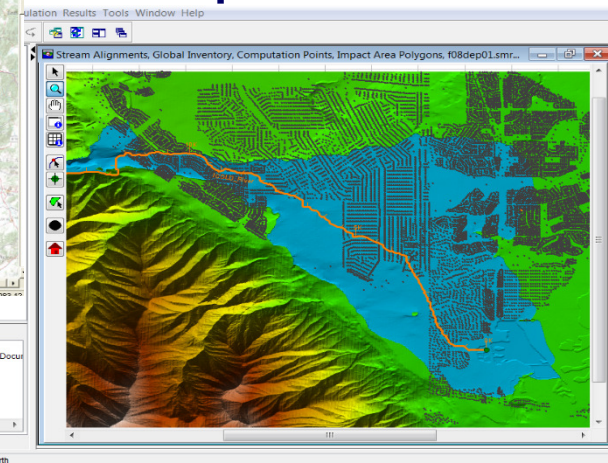
USACE Support to the Sava RB - 2nd phase

Hydrologic & hydraulic models

Hydraulic Modelling



Consequence assesment



Models use:

- CC impact assessment
- (III) Flood maps
- Flood forecast
- Flood impacts analysis

IV Flood Risk Management Plan

WBIF project proposal

Improvement of Joint Flood Management Actions in the SRB

- **Component I: Joint Flood Risk Management Plan for the SRB including Programme of Measures**
 - Plan with Programme of Measures
 - Environmental Impact Assessment Study for the PoM

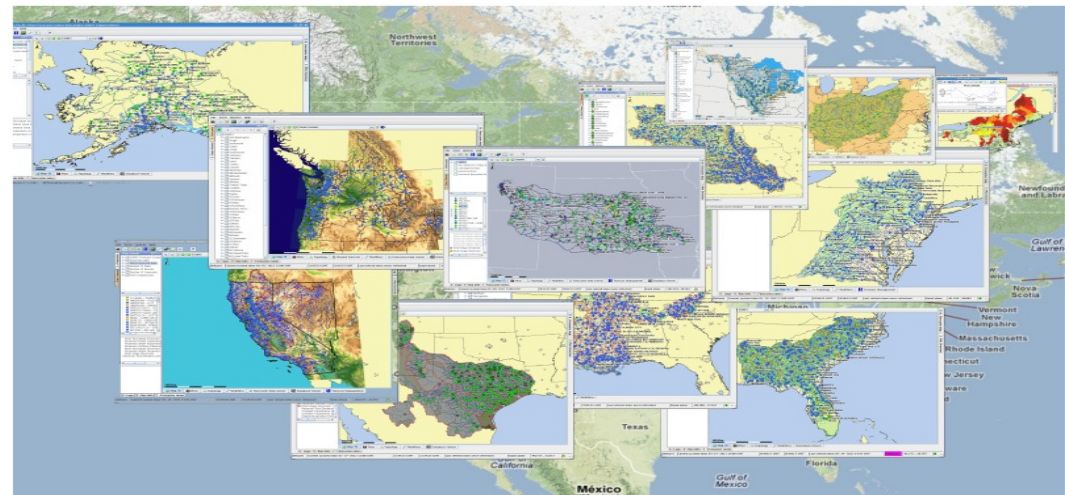
V Flood forecasting, warning and alarm system

WBIF project proposal

Improvement of Joint Flood Management Actions in the SRB

- **Component II: Flood forecasting and warning system for the SRB**
 - Identification, assessment and acquisition of relevant data and information
 - Harmonization of data and methods: ***a common platform***
 - Assessment of predictive uncertainty and scenario generation
 - Set up, testing and operational use of predictions
 - Gap analysis and follow up

Delft-FEWS (Flood Emergency Warning System) is an open platform which can handle different data formats and it is compatible with various models



THANK YOU

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