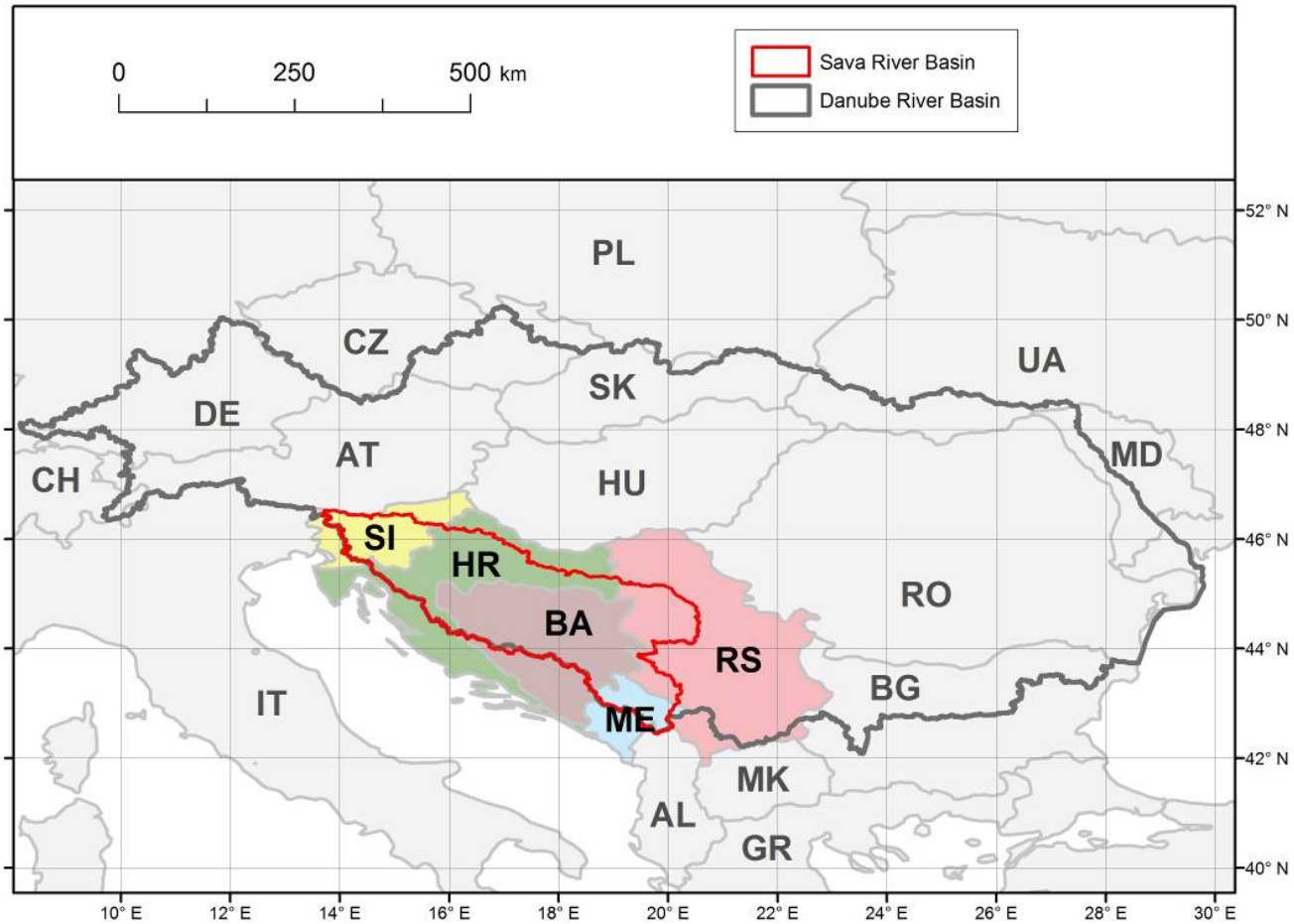


# Hydrological and meteorological issues in the framework of ISRBC

WMO RA VI Hydrology Forum,  
Oslo, 21-23 September 2016

Dr Dejan Komatina,  
Secretary, ISRBC

# Sava river basin



# Scope of cooperation

- **Management plans**  
(river basin, flood risk, sediment, climate adaptation, contingency)
- **Integrated systems**  
(information, forecasting, warning)
- **Economic activities**  
(navigation, river tourism)
- **Policy**  
(protocols, policies / guidelines, harmonization)



# Links to national institutions

- Institutions **officially nominated by the governments** (mostly ministries)
- **NHMSs**
  - **Expert Group for HM issues** (all members come from NHMSs)
  - **Annual meetings** with directors of NHMSs and WMO rep's
- **Water agencies** and other institutions

# Basin plans

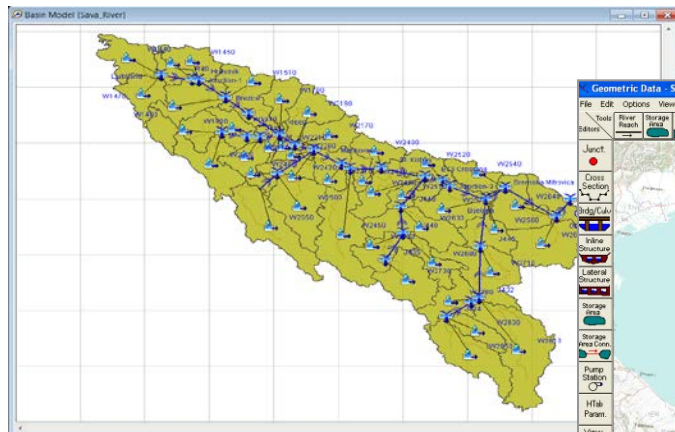
- **River Basin Management Plan**  
(2014, update)
- **Flood Risk Management Plan**  
(2016-2018)
- **Sediment Management Plan**  
(preparatory steps)
- **Water & Climate Adapt. Plan**  
(2015)



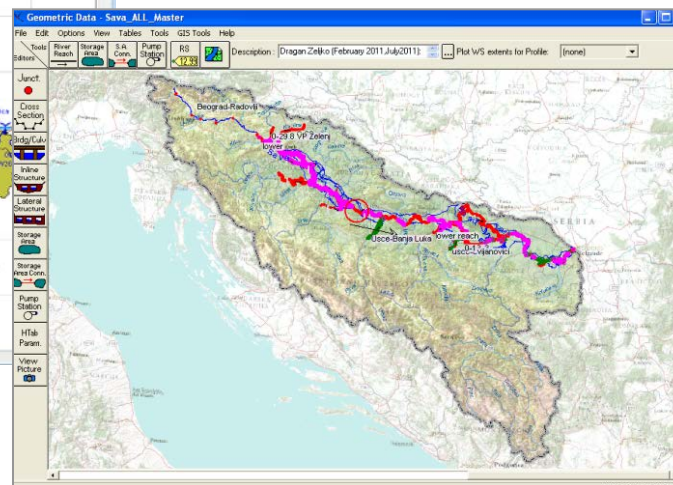
# Basin systems

- **Flood Forecasting & Warning System (2016-2018)**
- **Simulation models (upgrade)**

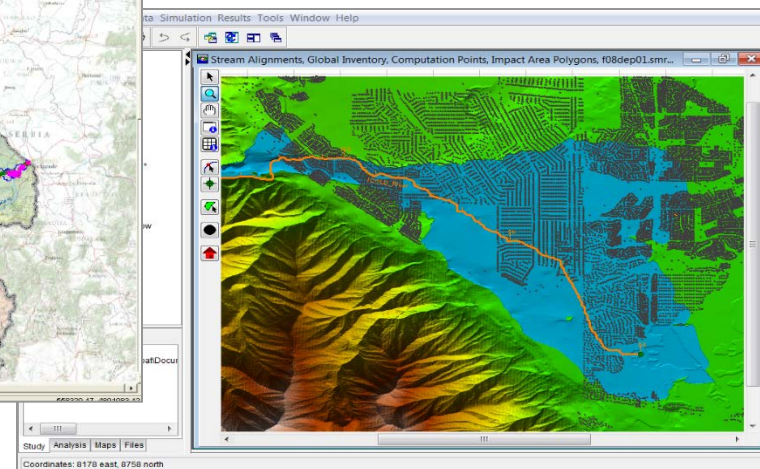
**Hydrologic model**



**Hydraulic model**



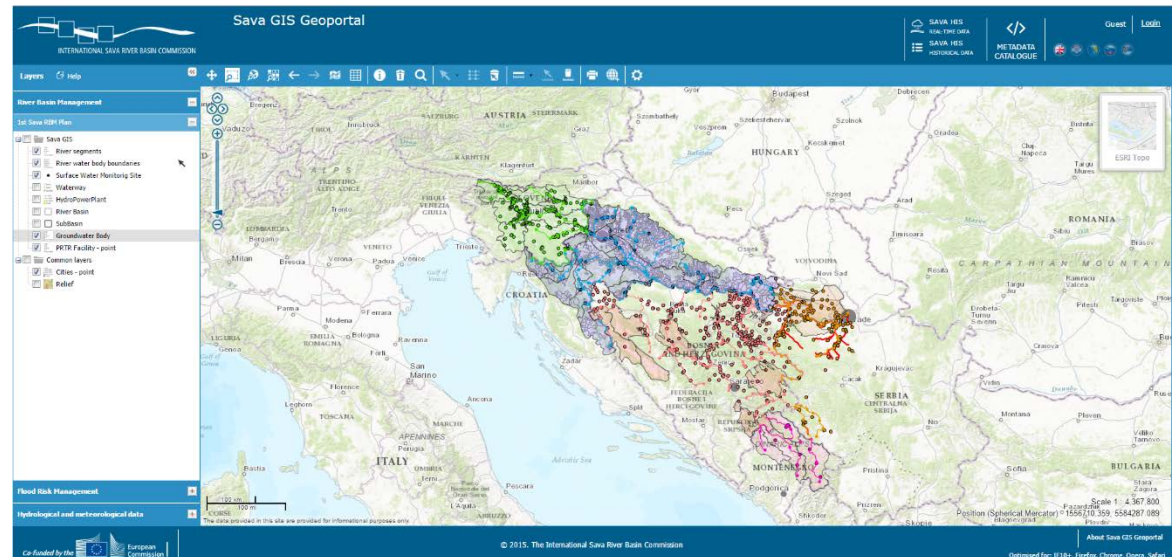
**Consequence assess. tool**



# Basin systems

- **Sava GIS (INSPIRE, WFD, ICPDR)**
  - River basin management data
  - Flood risk management data
  - Historical H&M data
  - **Other** databases (in future)
    - Accident prevention and control
    - Sediment management
    - Navigation

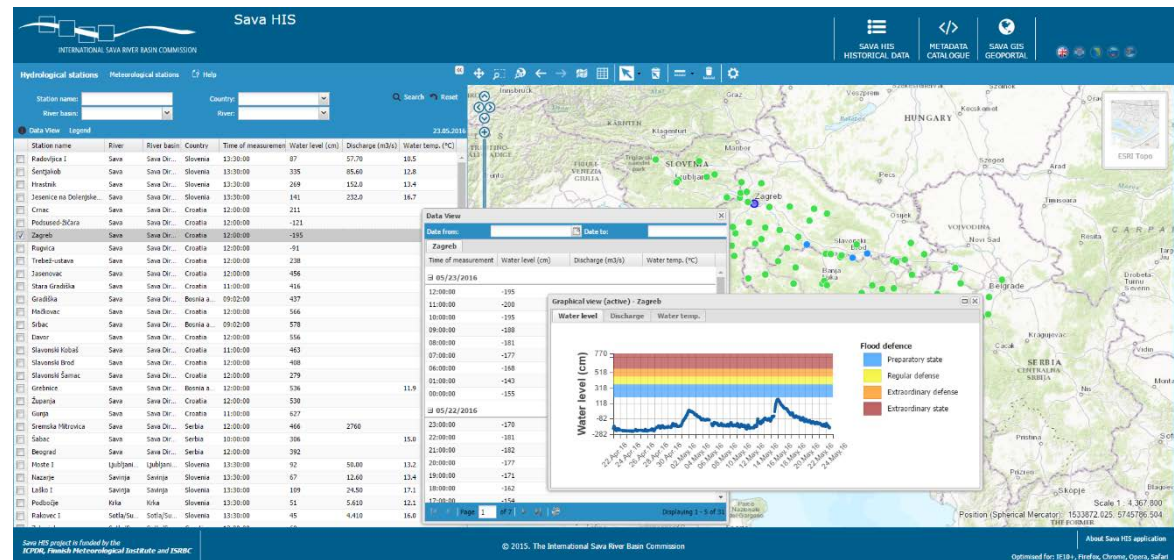
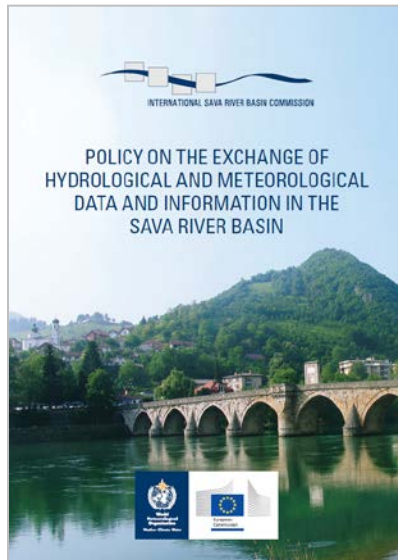
[www.savagis.org](http://www.savagis.org)



# Basin systems

- **Sava HIS** (INSPIRE, WMO resolutions)
  - ‘Real time’ H&M data
  - Sediment transport data (2016)
- **Joint measurements at border sections** (since 2013)

[www.savahis.org](http://www.savahis.org)





# Protocols to FASRB

Issue	Signed	Ratified by	In force since
<b>Navigation Regime</b>	Kranjska Gora, 3 Dec. 2002	All Parties	29 Dec. 2004
<b>Prevention of Water Pollution caused by Navigation</b>	Belgrade, 1 June 2009	BA, HR, RS	
<b>Flood Protection</b>	Gradiška, 1 June 2010	All Parties	27 Nov. 2015
<b>Sediment Management</b>	Brčko, 6 July 2015	BA, HR, RS	
<b>Emergency Situations</b>	Final harmonization expected		
<b>Transboundary Impact</b>	Draft under reconsideration		

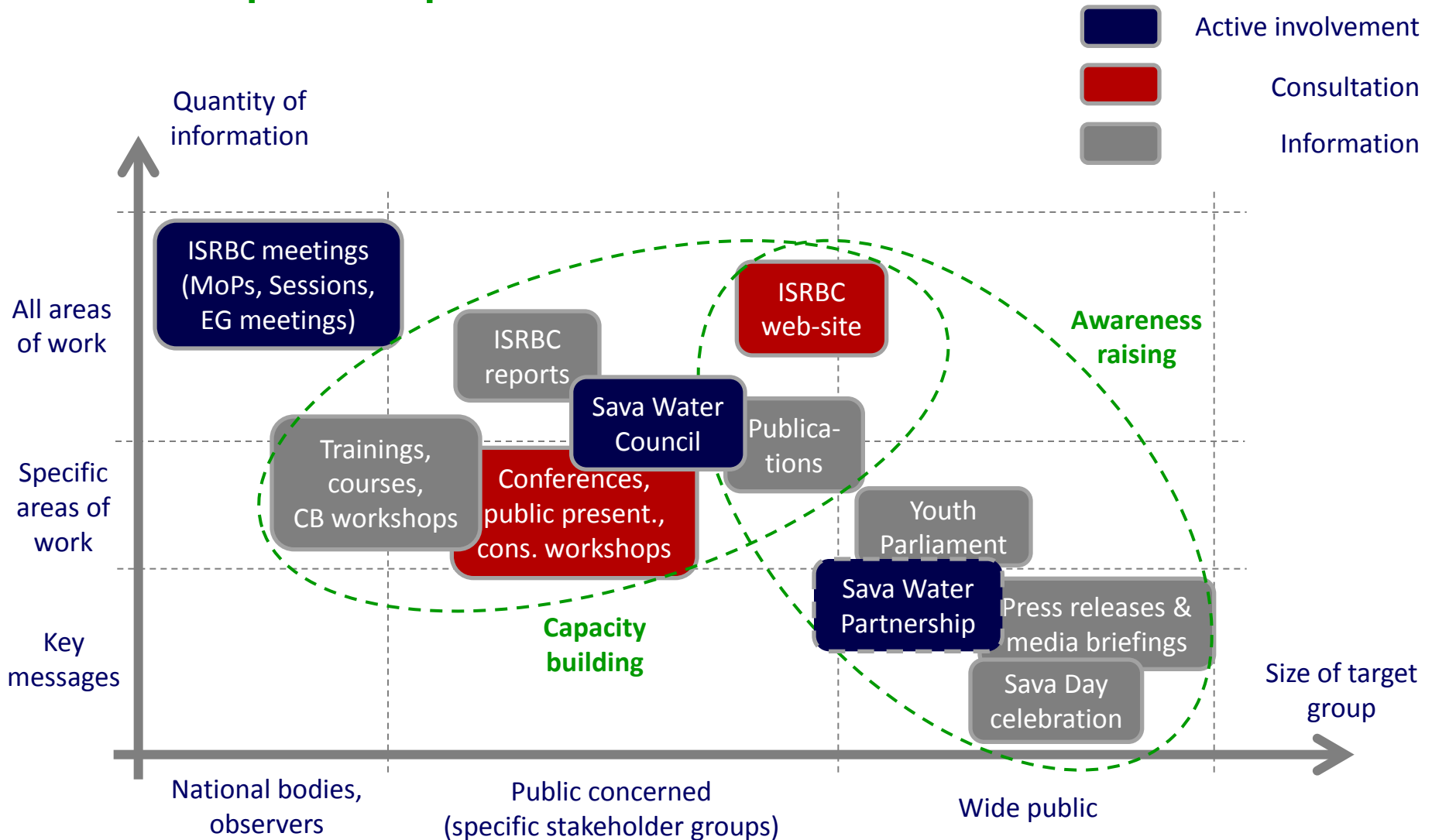
# Capacity building

- **Trainings, courses, workshops**

- Water-food-energy-ecosystems nexus
- AEWS
- Sediment management
- Water quality monitoring & river morphology
- Flood management
- Hydrological modelling
- GIS, HIS



# Public participation



# Conclusions

- **Sound legal & institutional framework**
- **Cooperation / partnerships**  
(all sectors / NHMSs / WMO)
- **Achievements**  
(basin plans, systems, ...)
- **Demanding, yet beneficial**

2006

