

Floods in the Sava River Basin in May 2014

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Sava River Basin

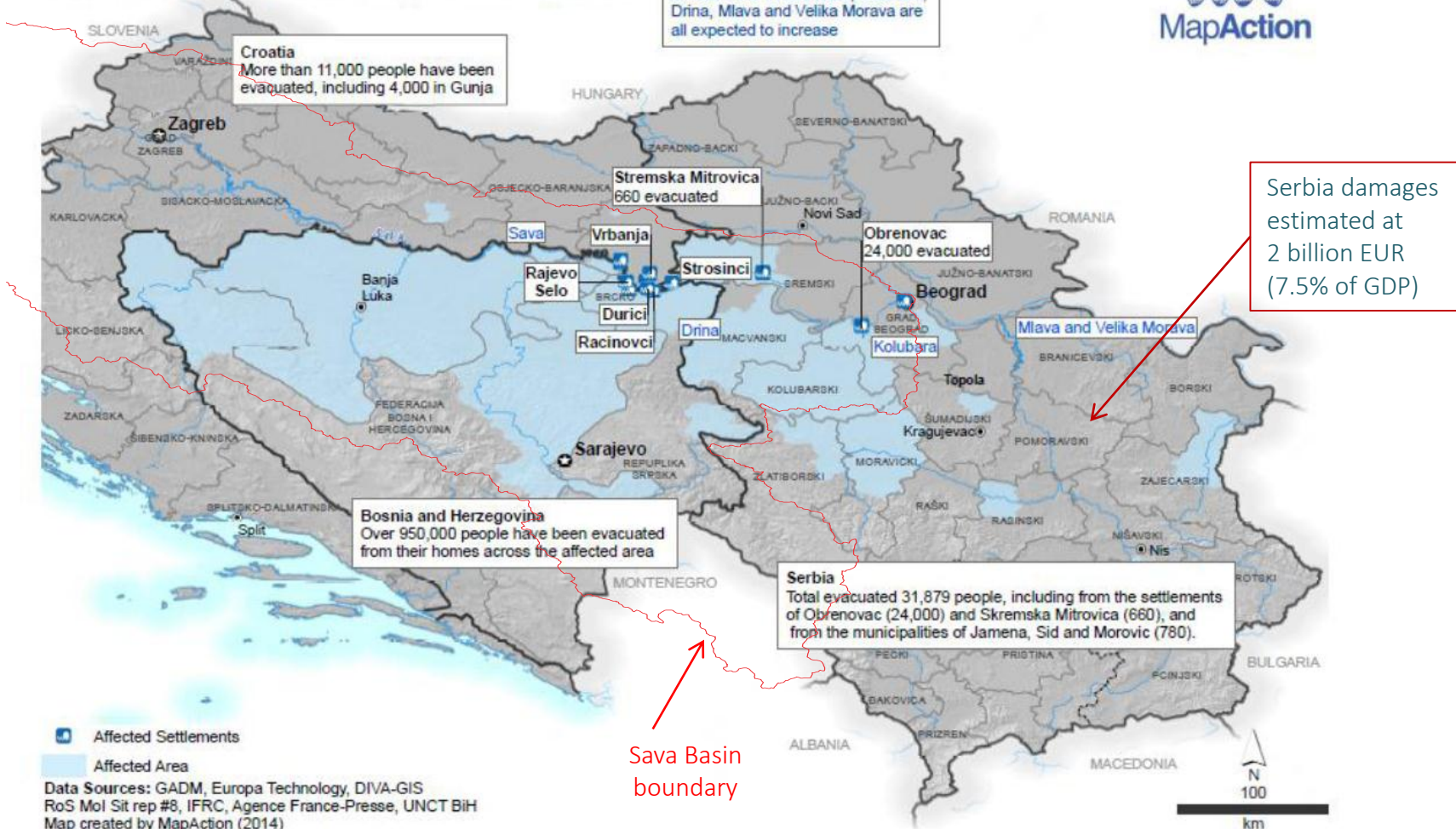
~ 95,000 km²



Flooded area in the Sava River Basin in May 2014

-  Flooded area*
-  Sava River Basin
-  River
-  State border

Overview of Flooding in Serbia, Bosnia and Herzegovina and Croatia (as of 22 May 2014)



Levels in the Rivers Sava, Kolubara, Drina, Mlava and Velika Morava are all expected to increase

Croatia
More than 11,000 people have been evacuated, including 4,000 in Gunja

Serbia damages estimated at 2 billion EUR (7.5% of GDP)

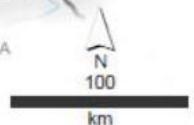
Bosnia and Herzegovina
Over 950,000 people have been evacuated from their homes across the affected area

Serbia
Total evacuated 31,879 people, including from the settlements of Obrenovac (24,000) and Skremska Mitrovica (660), and from the municipalities of Jamena, Sid and Morovic (780).

- Affected Settlements
- Affected Area

Data Sources: GADM, Europa Technology, DIVA-GIS
RoS Mol Sit rep #8, IFRC, Agence France-Presse, UNCT BiH
Map created by MapAction (2014)

Sava Basin boundary



Sava River Basin
~95000 km²



Kupa: Karlovac



Una: Sanski Most



Vrbas: Banja Luka



Bosna: Doboј



Sava: Gunja

Flooded gauging station



Bijeljina



Dyke breaks near Bijeljina

Sremska Mitrovica



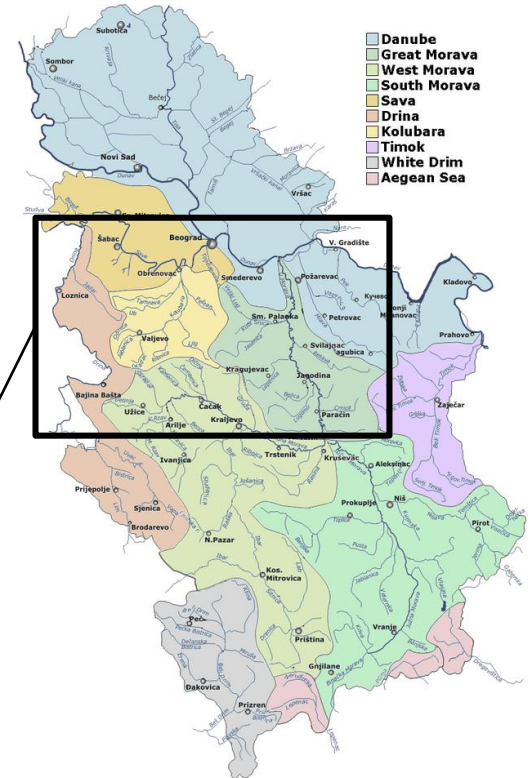
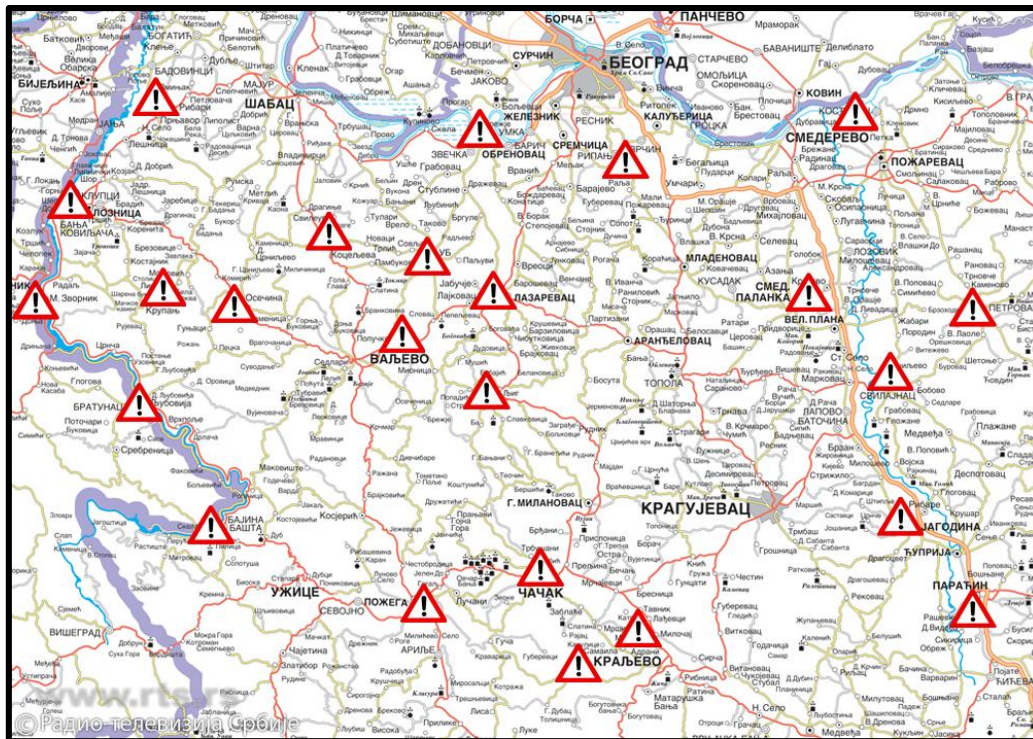
Droughts and floods



Obrenovac



Flash floods in Serbia



Serbia: Krupanj



Krupanj, satellite image 21st May 2014



Serbia: Smederevska Palanka



Serbia: Svilajnac



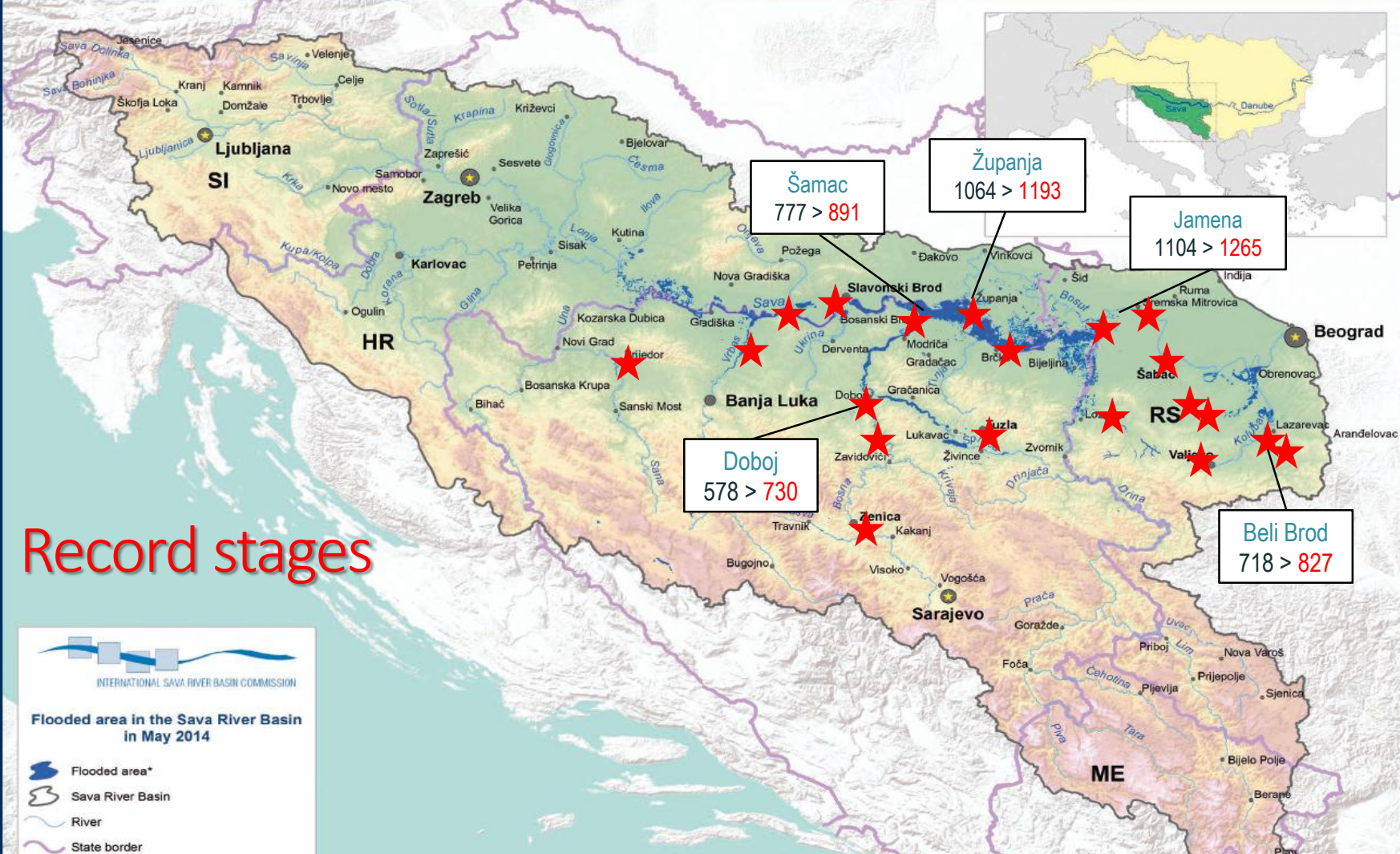
Serbia: Kraljevo



Infrastructure

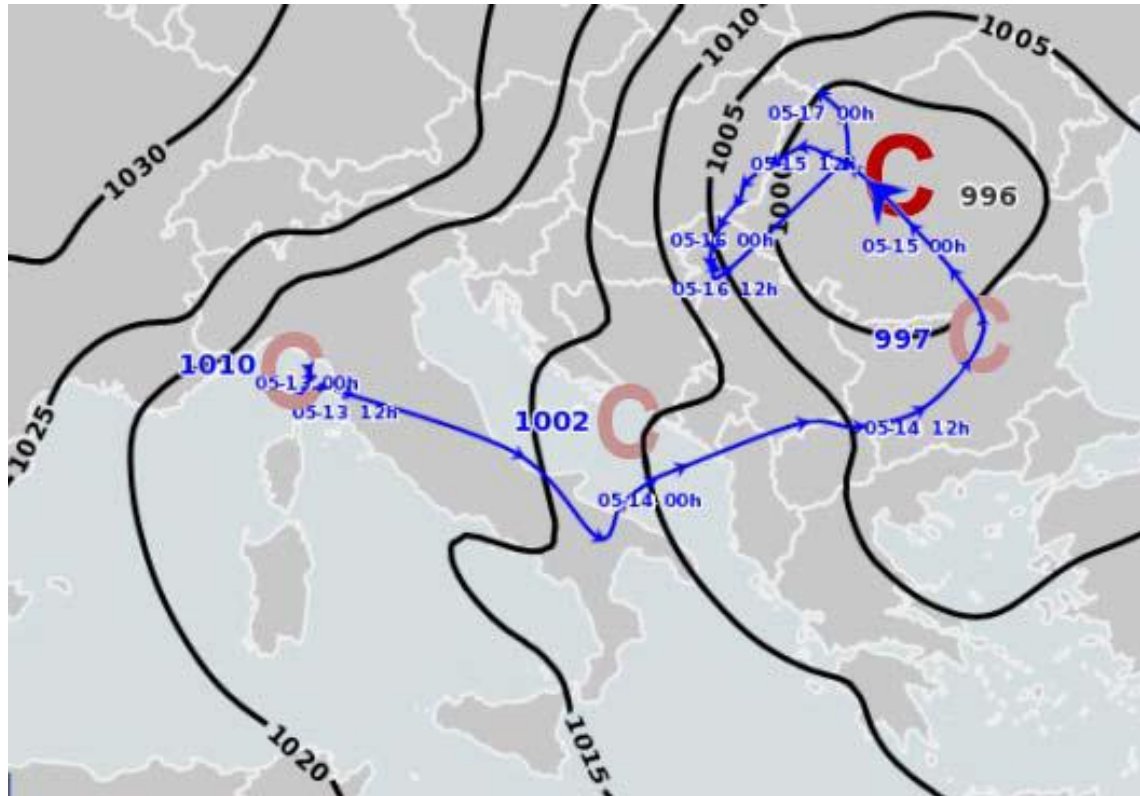


Record stages

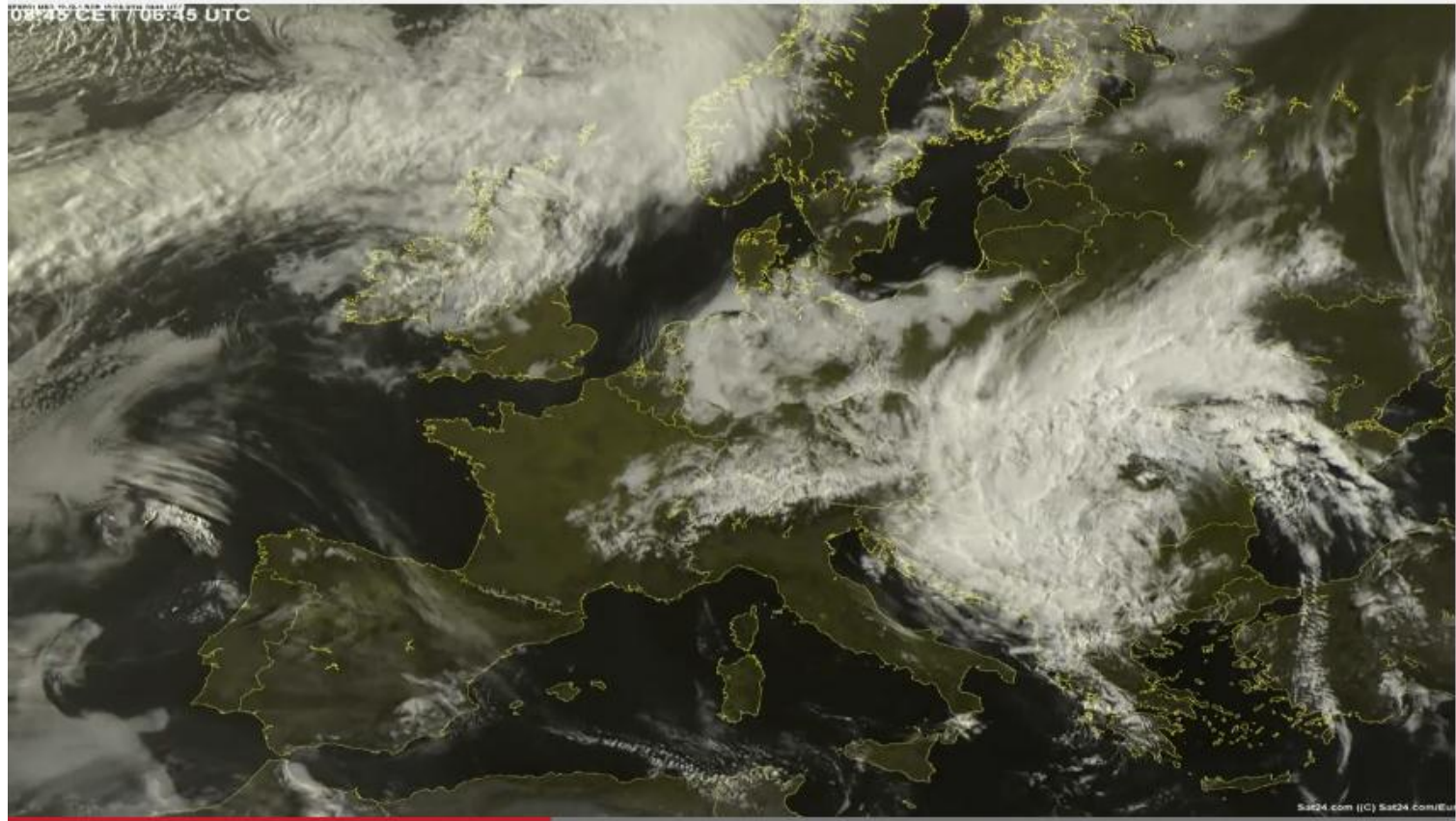


Flooded area in the Sava River Basin
in May 2014

Movement of the cyclone center between May 13 and 17

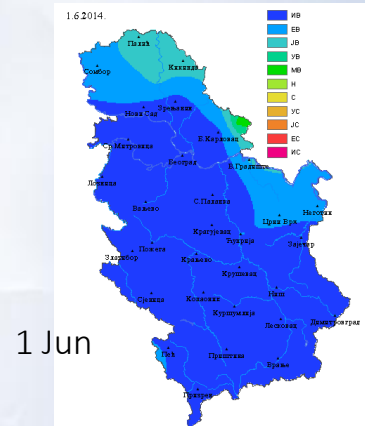
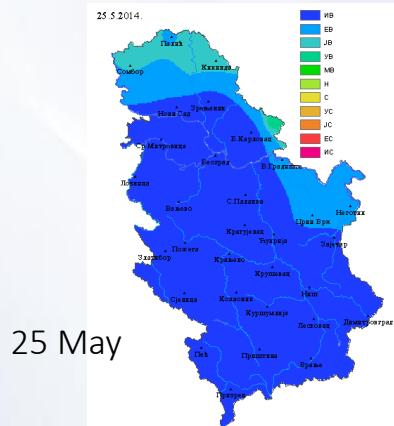
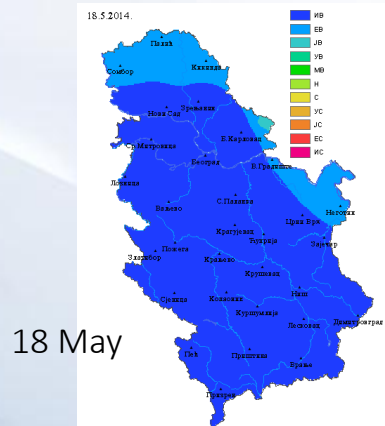
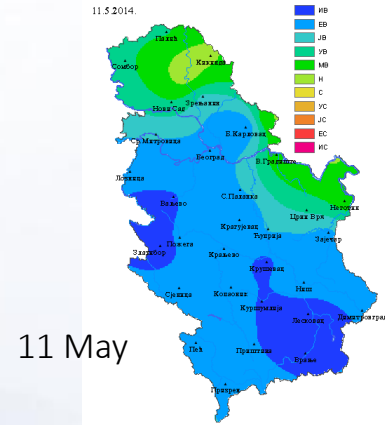
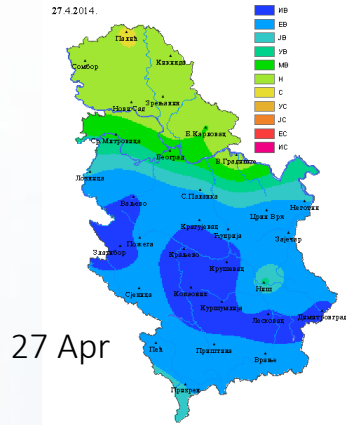
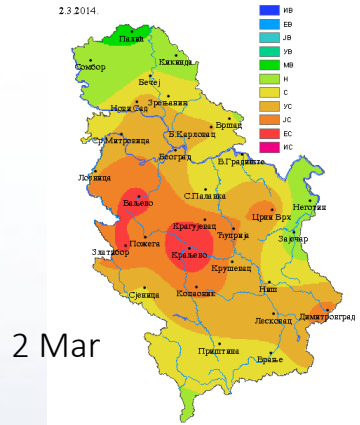


Satellite image 15 May 2014 08:45 CET



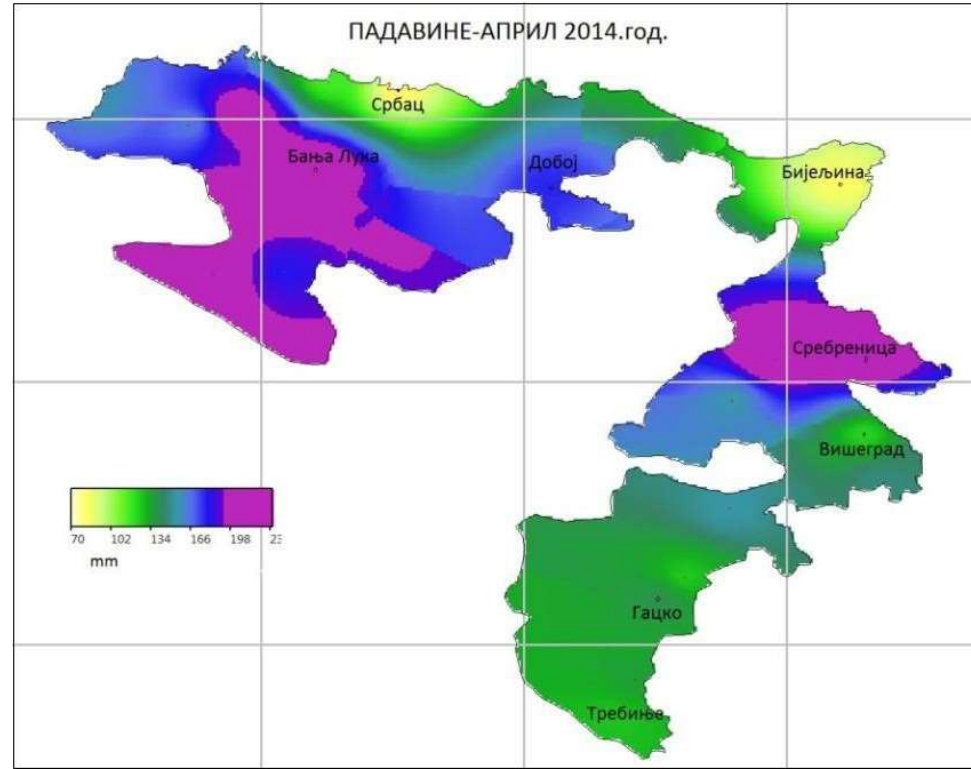
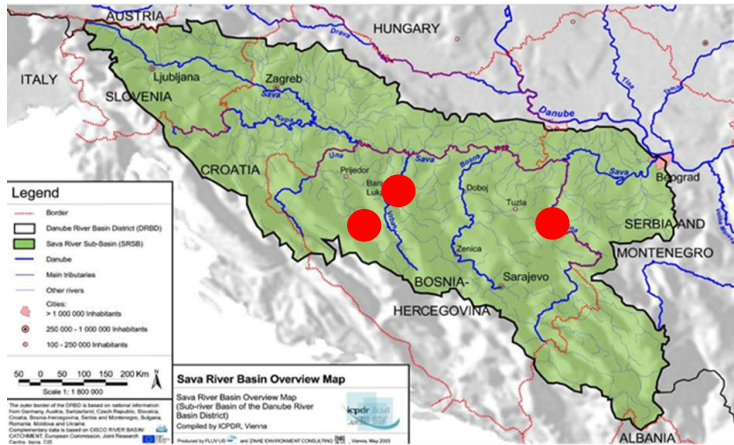


SOIL MOISTURE CONDITIONS based on SPI



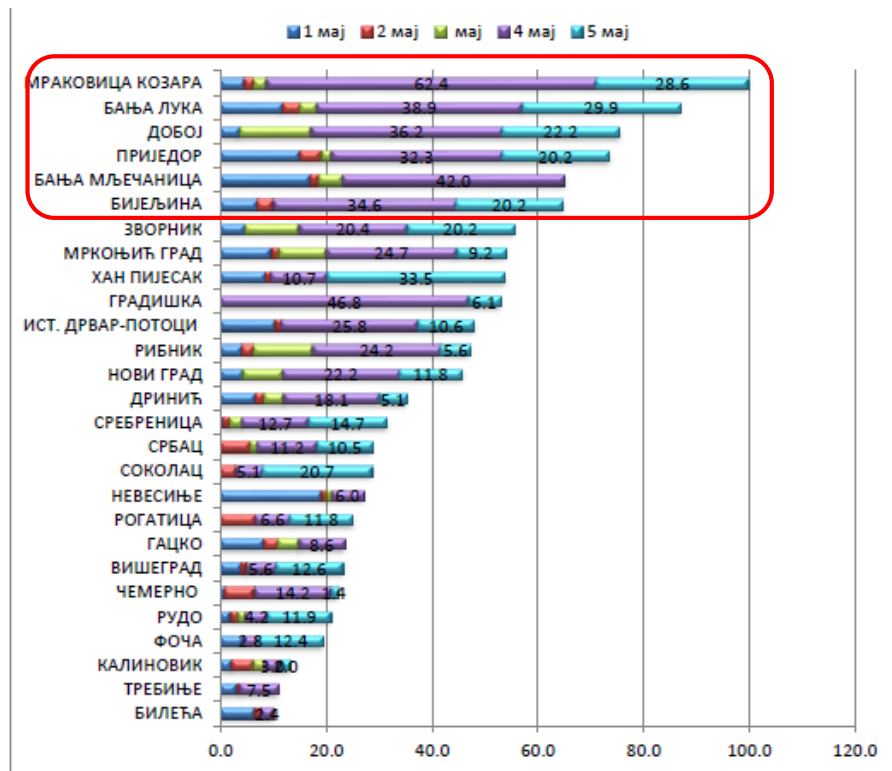
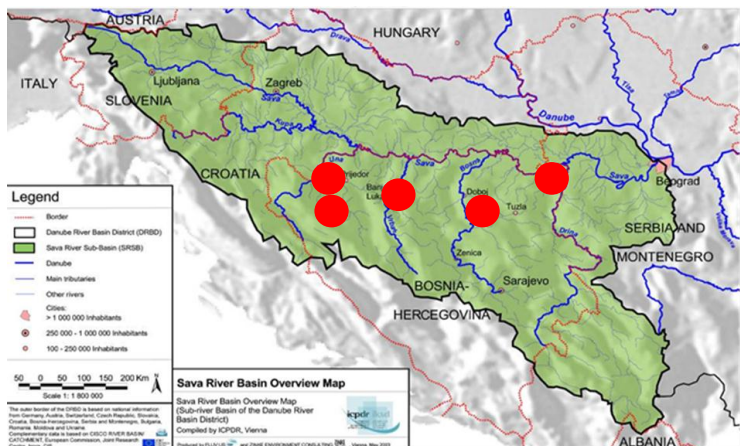
Antecedent moisture conditions: Antecedent precipitation

April precipitation in BiH-RS
(Una, Vrbas and Bosna basins)



Antecedent moisture conditions: Antecedent precipitation

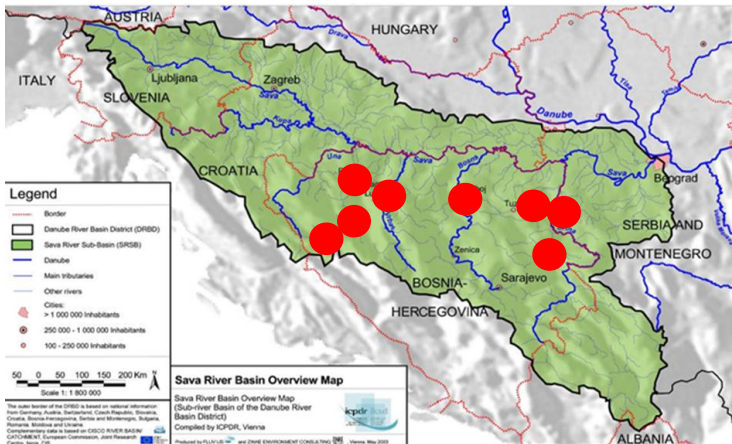
Precipitation for 1-5 May 2014 in BiH-RS
(Una, Vrbas and Bosna basins)



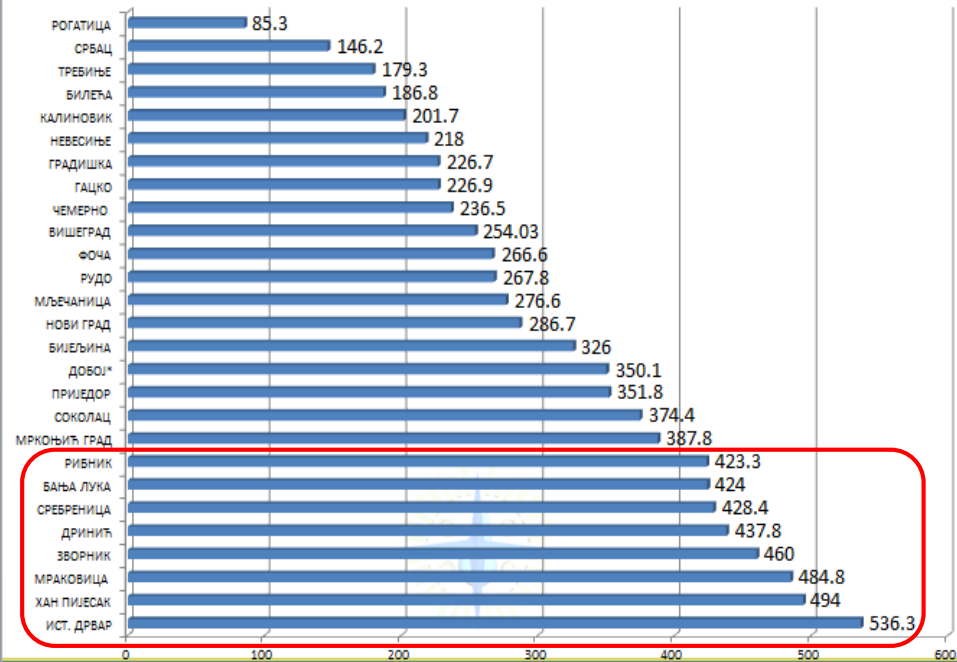
Сл. 16. Укупна количина падавина у првих пет дана маја месеца 2014-приказ количина дан за даном, измјерене на метеоролошким станицама РХМЗ Републике Српске.

Antecedent moisture conditions: Antecedent precipitation

April+May precipitation in BiH-RS
(Una, Vrbas and Bosna basins)

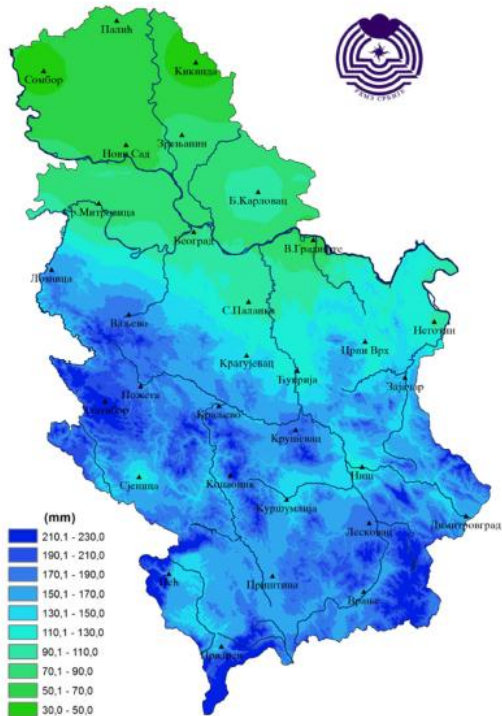


Обилне падавине у априлу и мају као узрок поплава

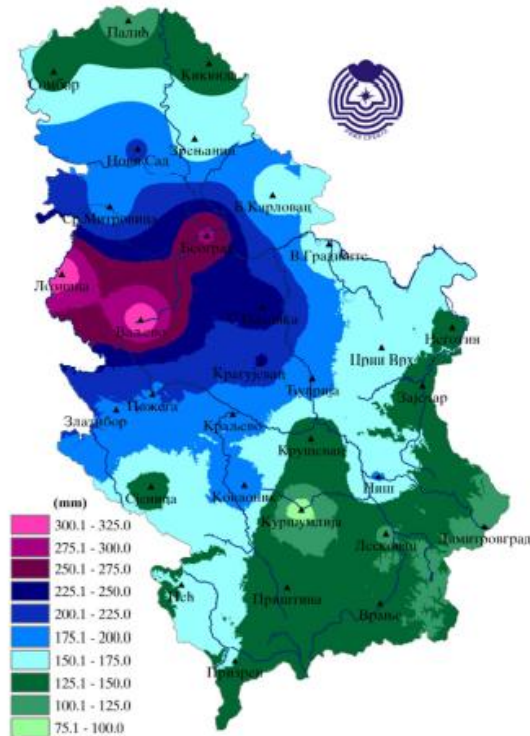


Antecedent moisture conditions: Antecedent precipitation Serbia

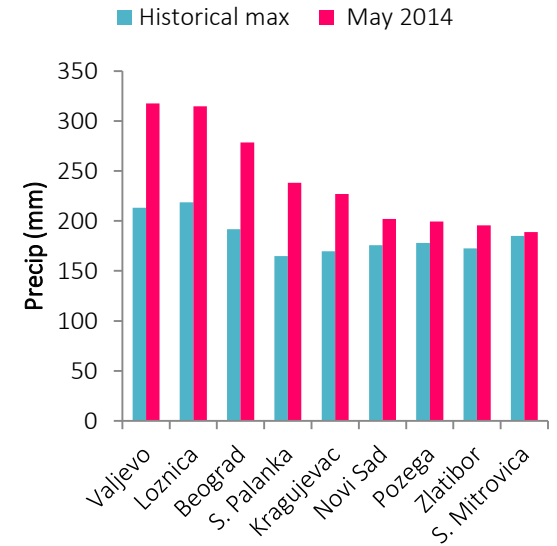
April 2014



May 2014



May precipitation



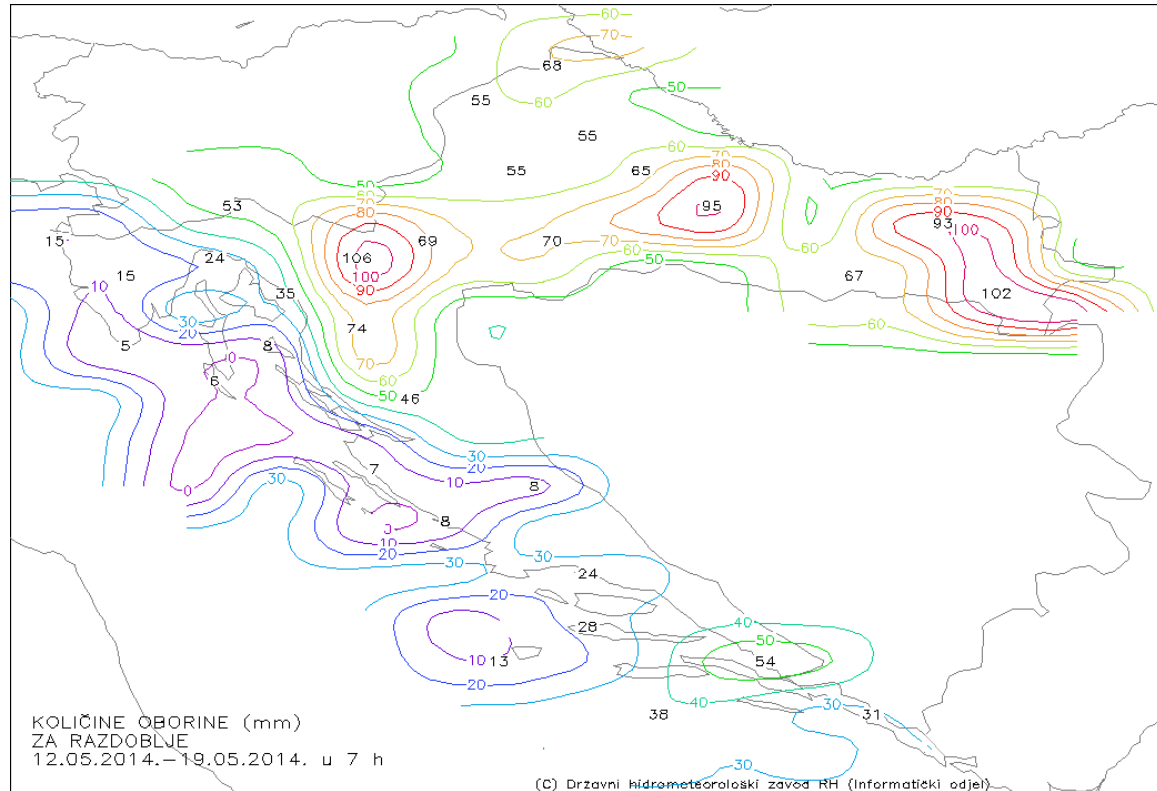
Antecedent moisture conditions: Antecedent precipitation Serbia



Met station	Month	Historical max	2014	Increase %
Loznica	April	123.7	151.4	18%
	May	207.8	306.1	32%
	April+May	274.8	457.5	40%
Valjevo	April	129.0	177.4	27%
	May	213.2	323.5	34%
	April+May	266.0	500.9	47%

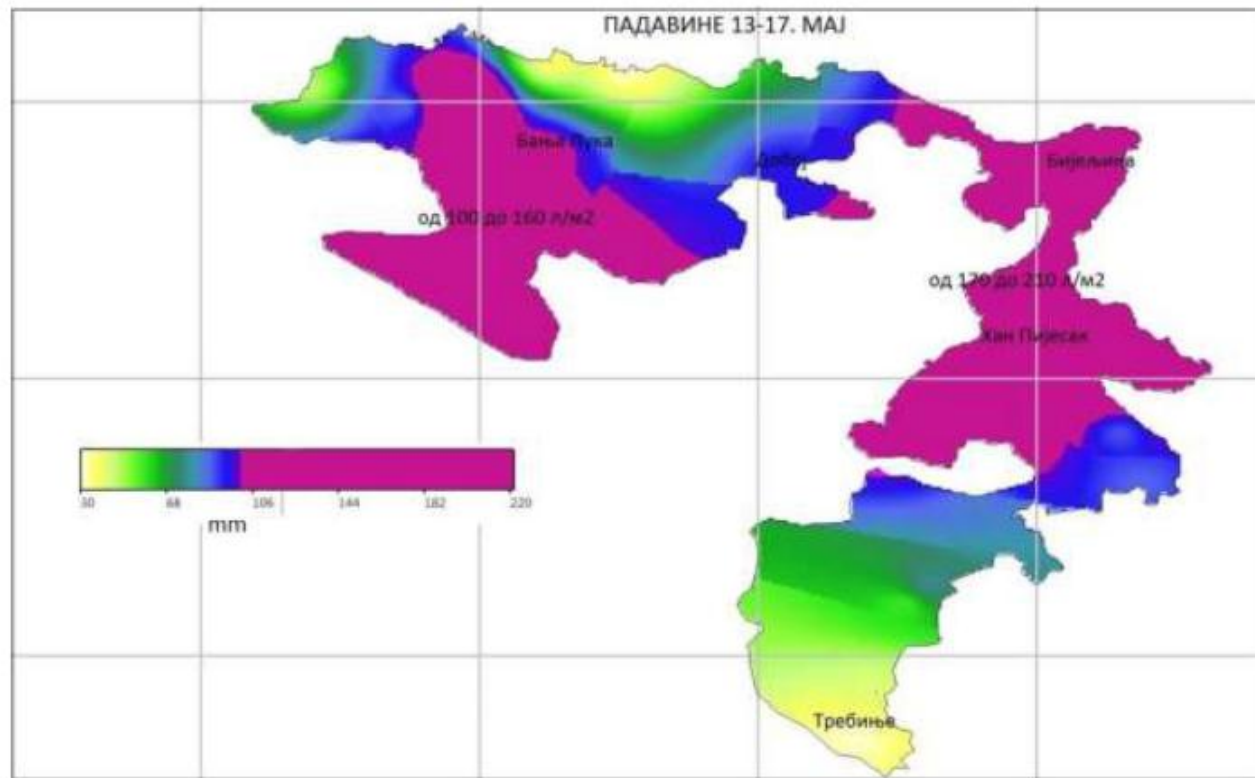
Precipitation 12-19 May 2014

Croatia precipitation



Precipitation 13-17 May 2014

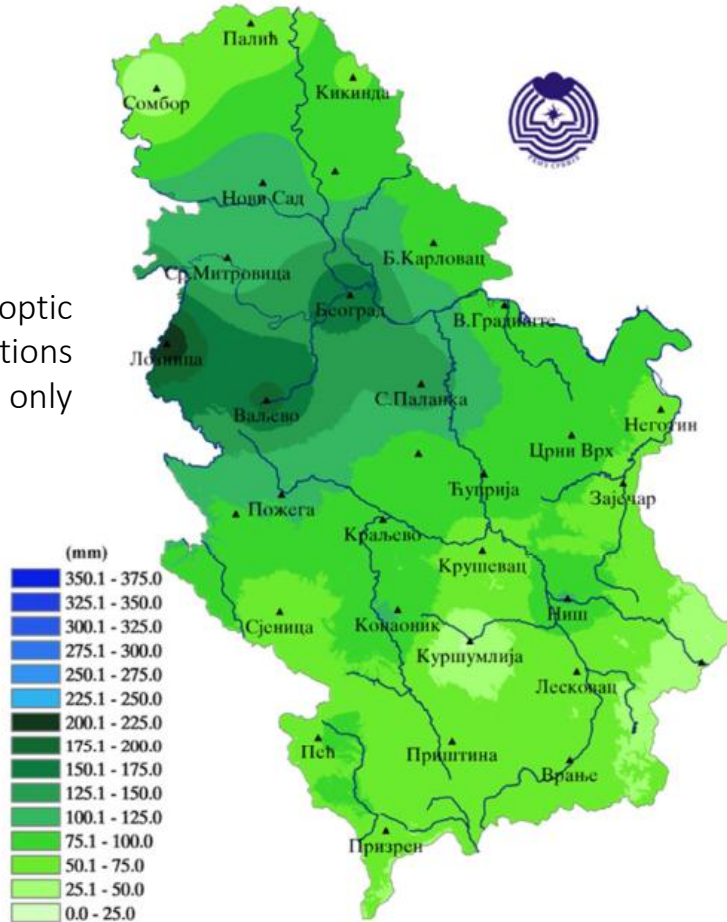
BiH-RS precipitation



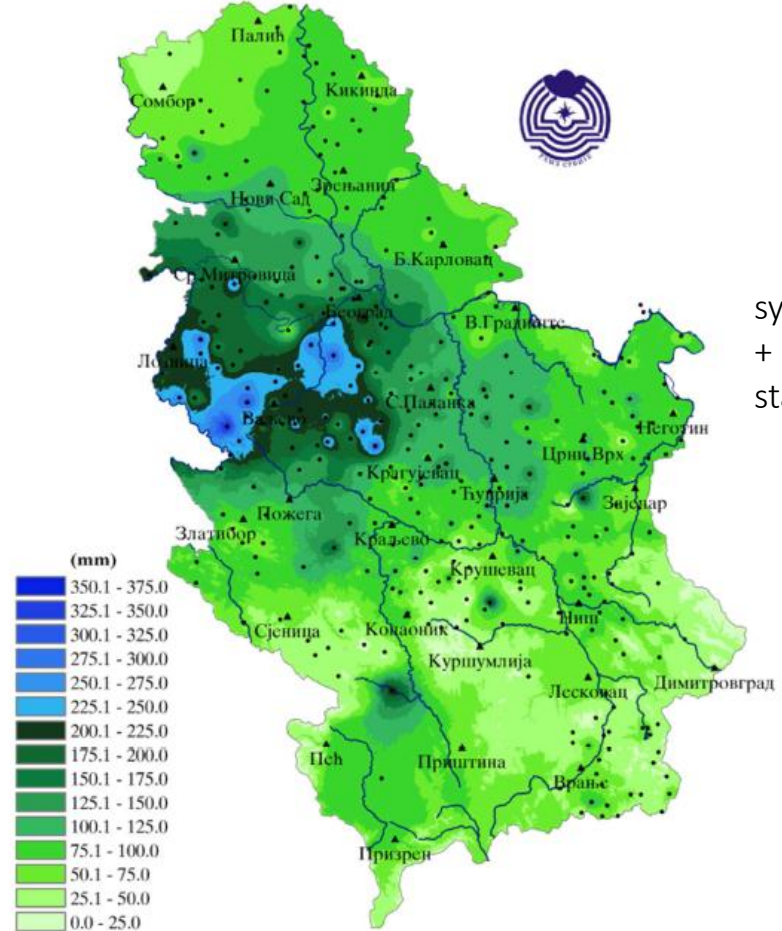
Сл. 30. Количина падавина-графички приказ за период 13-17 мај 2014 године

Serbia Precipitation 14-16 May 2014

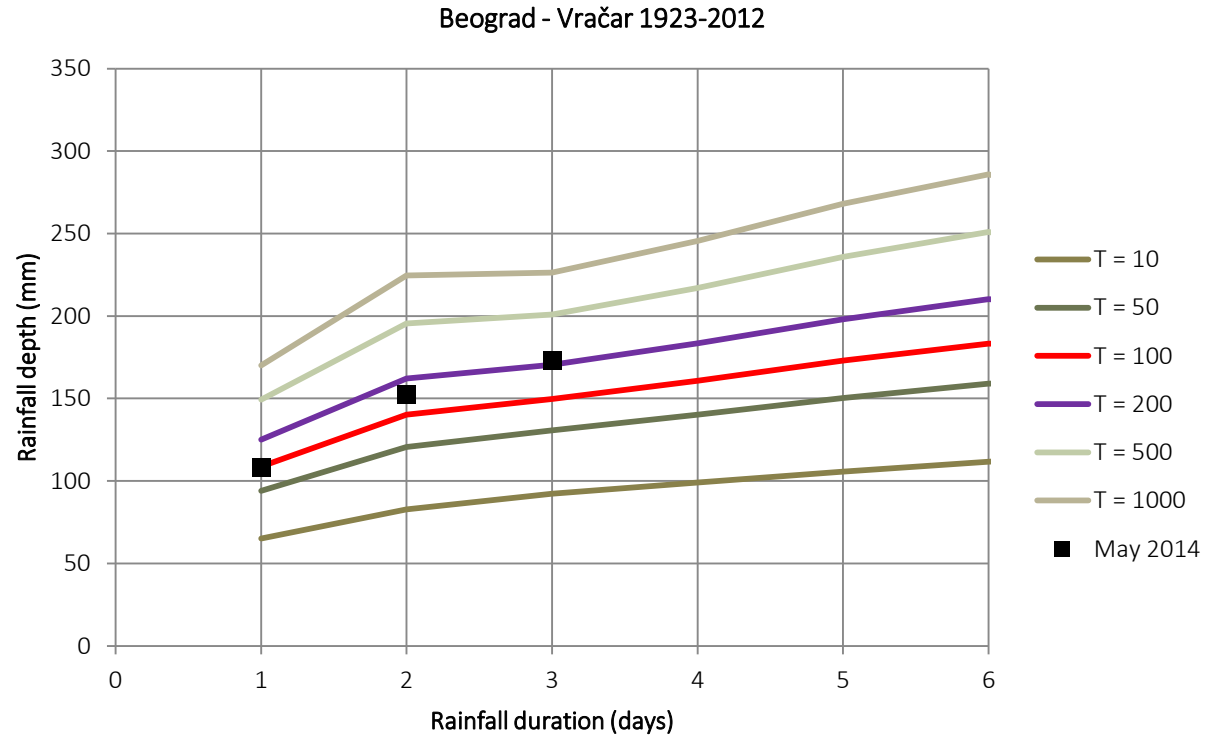
synoptic
stations
only



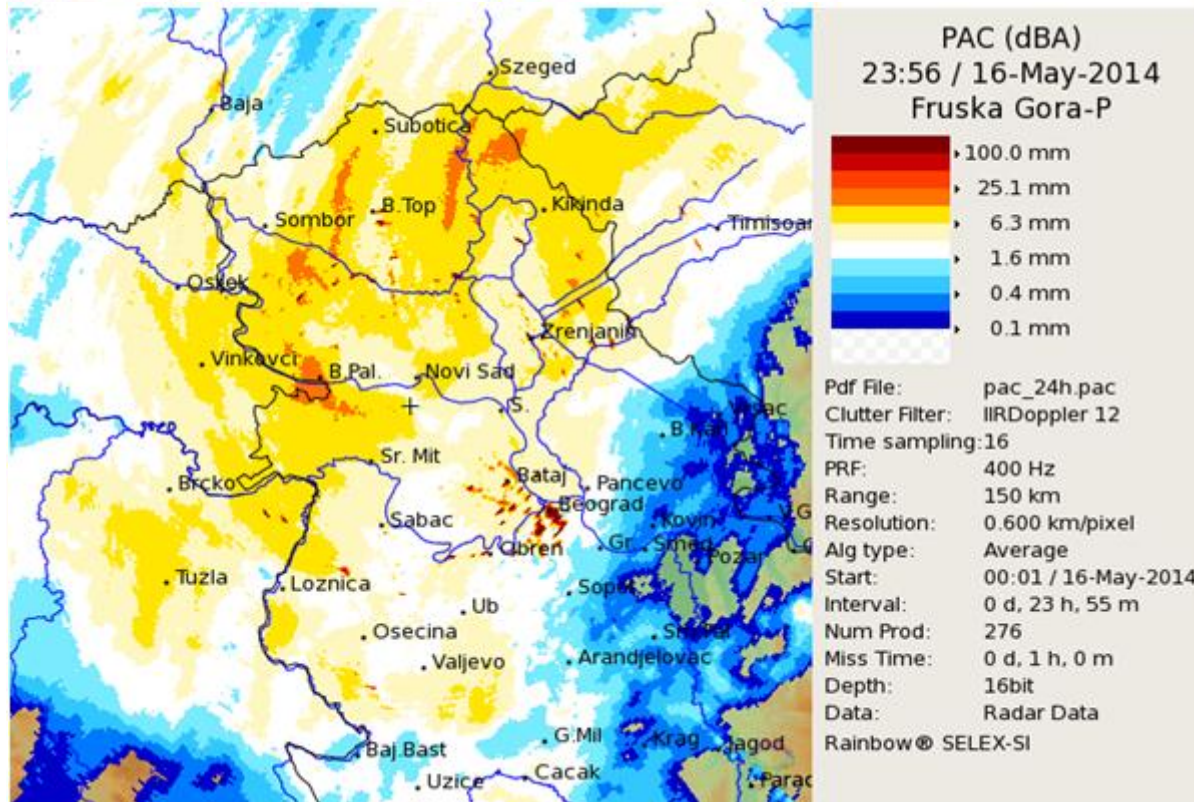
synoptic
+ precip.
stations



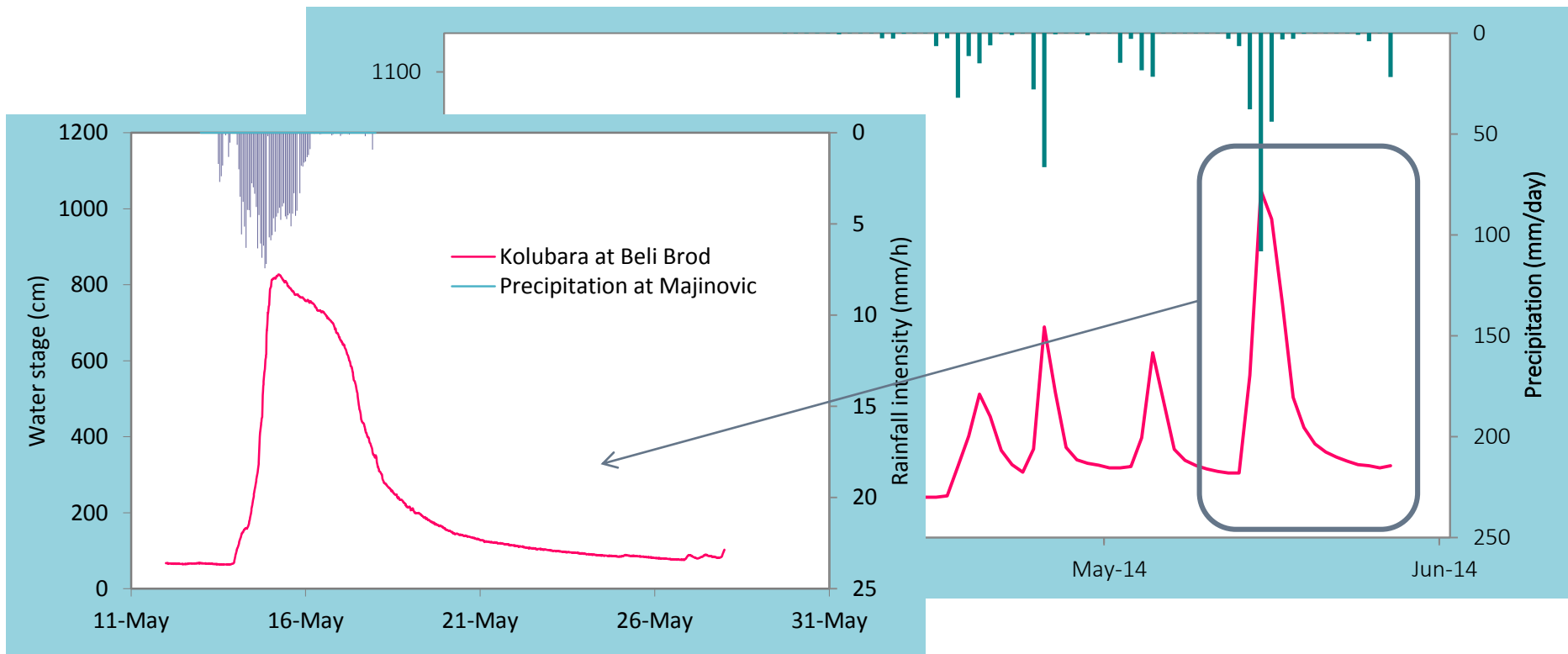
Rainfall frequency



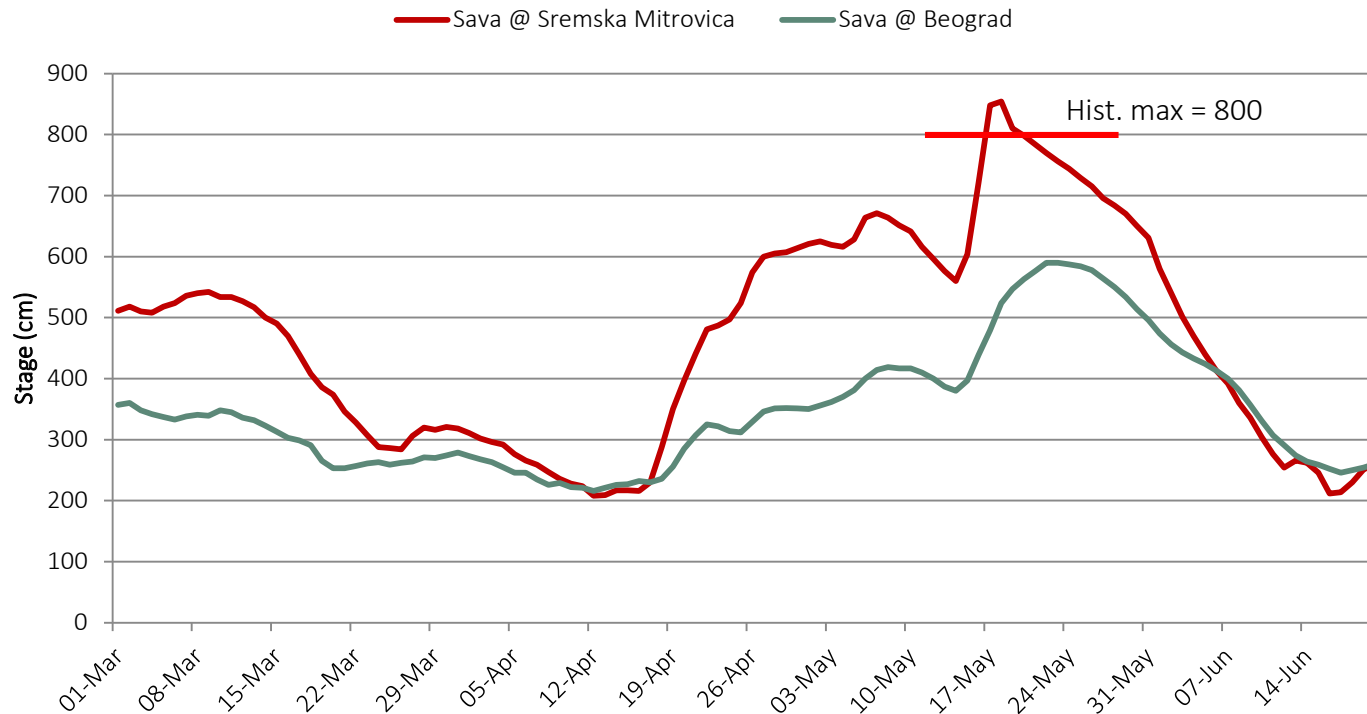
Precipitation 13-16 May 2014



Runoff

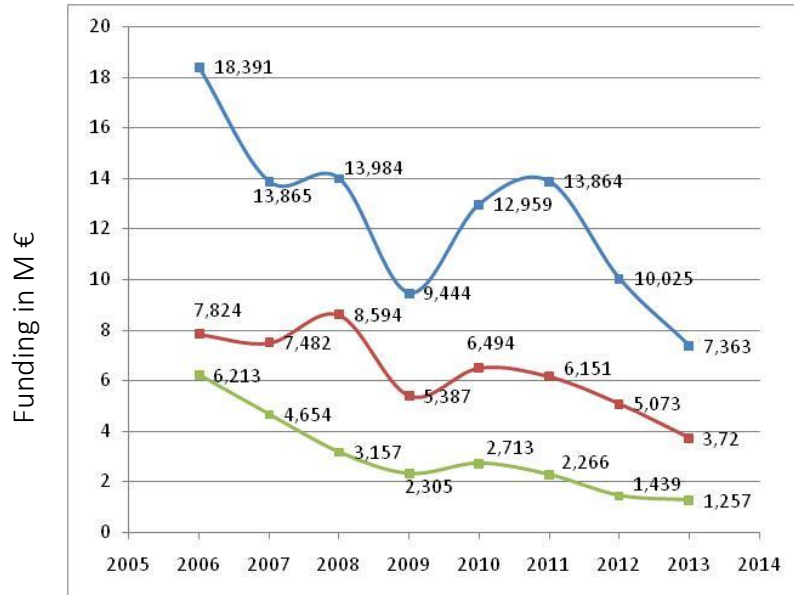


Runoff



Instead of conclusion

Funding of the Public Water Management Company “Srbijavode” is 20-30% of the realistic needs



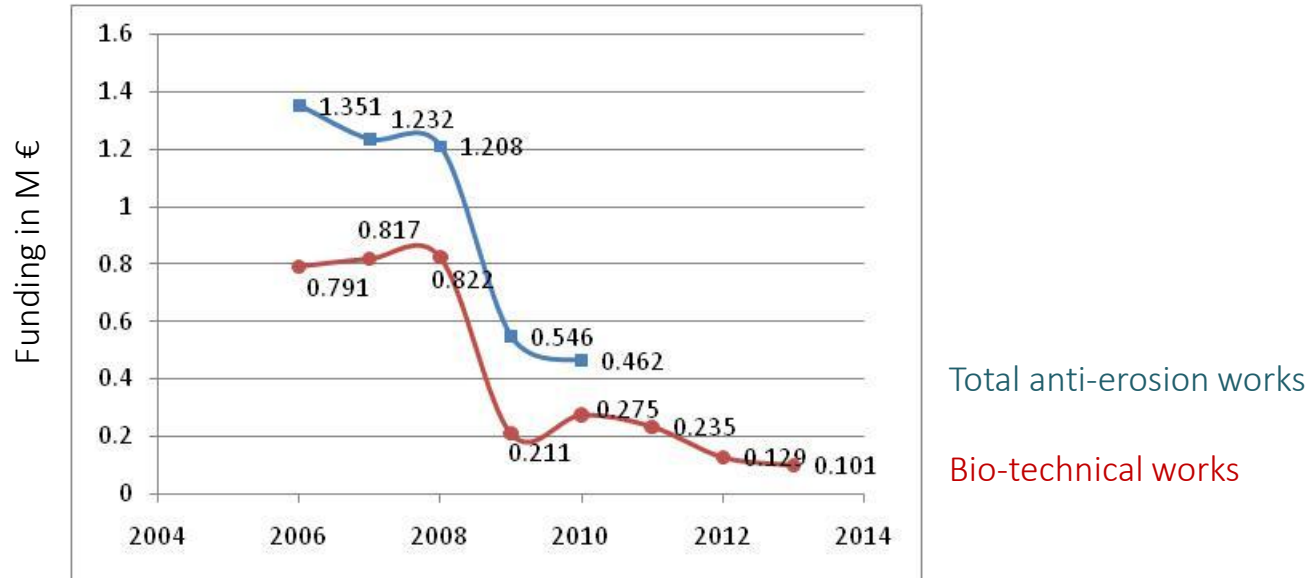
Total JVP Srbijavode

Maintenance of flood protection structures

Investments in new structures and reconstruction

Instead of conclusion

Funding of the Public Water Management Company “Srbijavode”



Acknowledgements

Republic Hydrometeorological Service of Serbia, www.hidmet.gov.rs

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State Hydrometeorological Service of Croatia, <http://meteo.hr/>

Republic Hydrometeorological Service of Republika Srpska, www.rhmzrs.com

International Sava River Basin Commission, www.savacommission.org

Conclusion

Promote the 'living with floods' principle... (EU Flood Directive)

