

Prva nacionalna radionica projekta
„DriDanube-Rizici od suše u Dunavskoj regiji”, 2.lipnja 2017.

OCJENA SUŠE PRIMJENOM RAZLIČITIH METODA

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SVEUČILIŠTE
JOSIPA JURJA STROSSMAYERA
U OSIJEKU



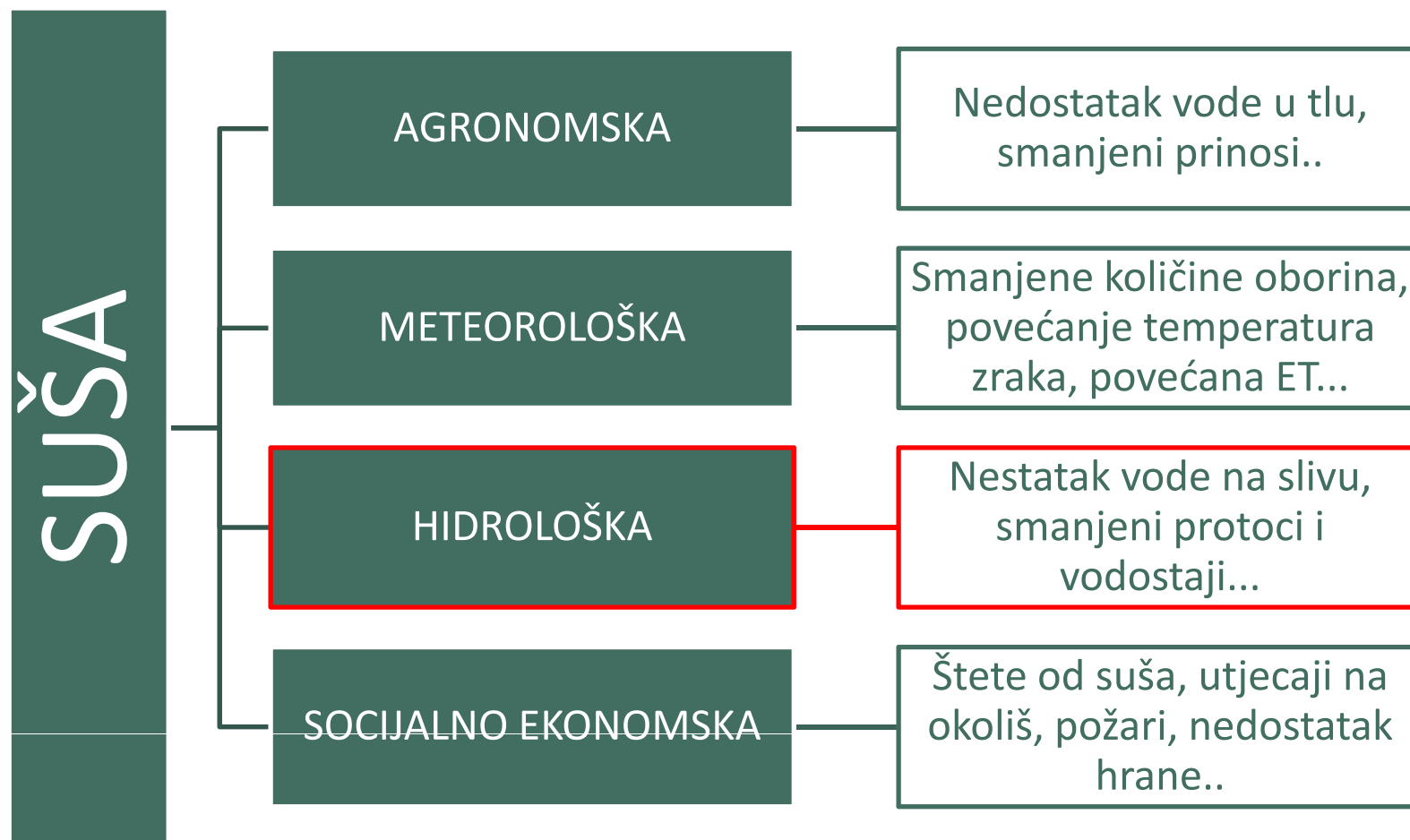
JOSIP JURAJ STROSSMAYER
UNIVERSITY OF OSIJEK

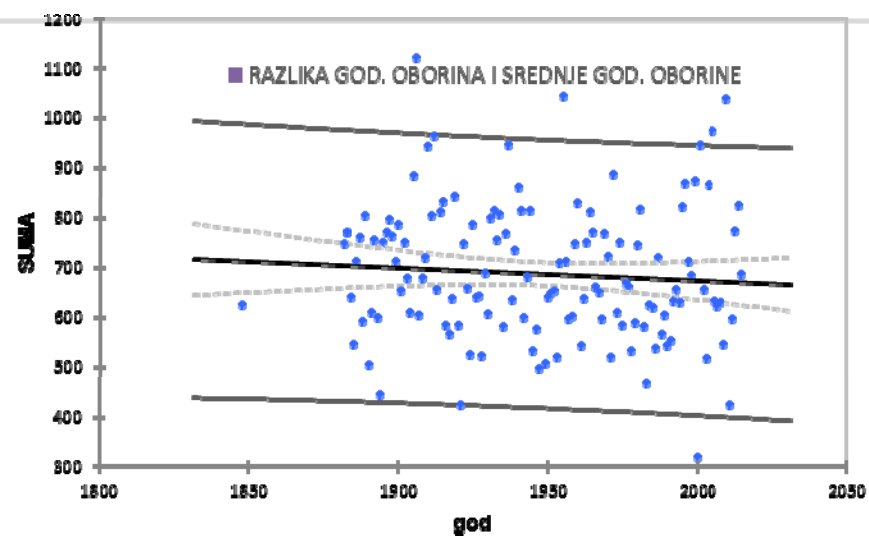
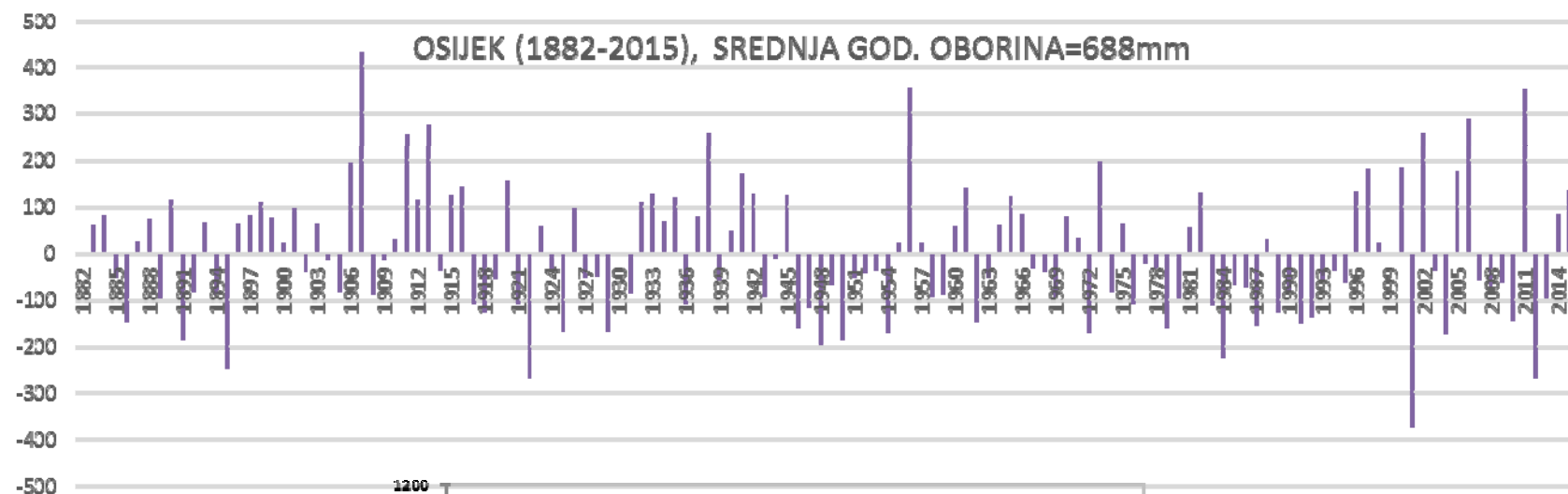


SADRŽAJ:

1. Uvod
2. Metode za ocjenu suše
3. Primjer: Osijek, Drava
4. Zaključak

- Složen problem značajan za poljoprivredu, vodno gospodarstvo i okoliš
- Zahvaća velike prostore
- Problem opažanje i predviđanja (u odnosu na **poplave**)
- Preventivne mjere – navodnjavanje, izgradnja akumulacija
- Indeksi za ocjenu suše



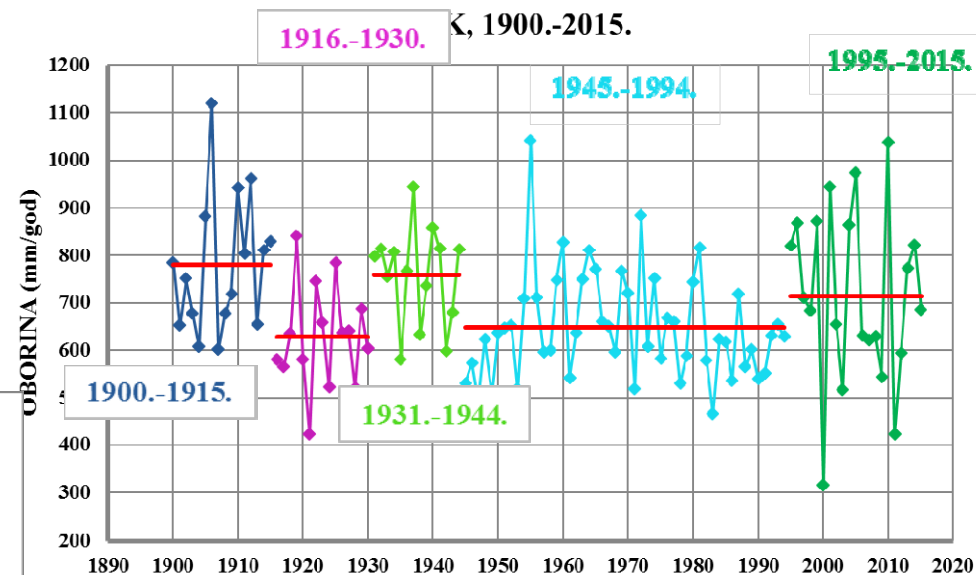
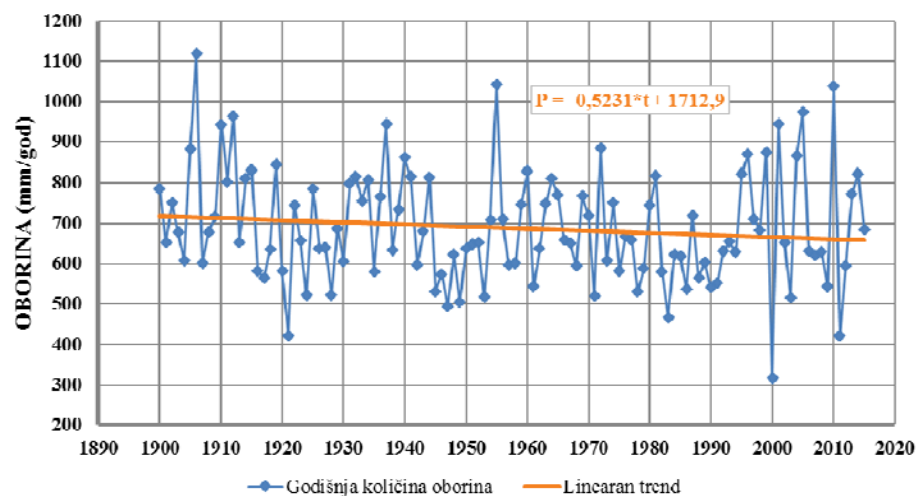


Model(SUMA) Conf. Interval (Mean 95%)
Conf. Interval (Obs 95%)

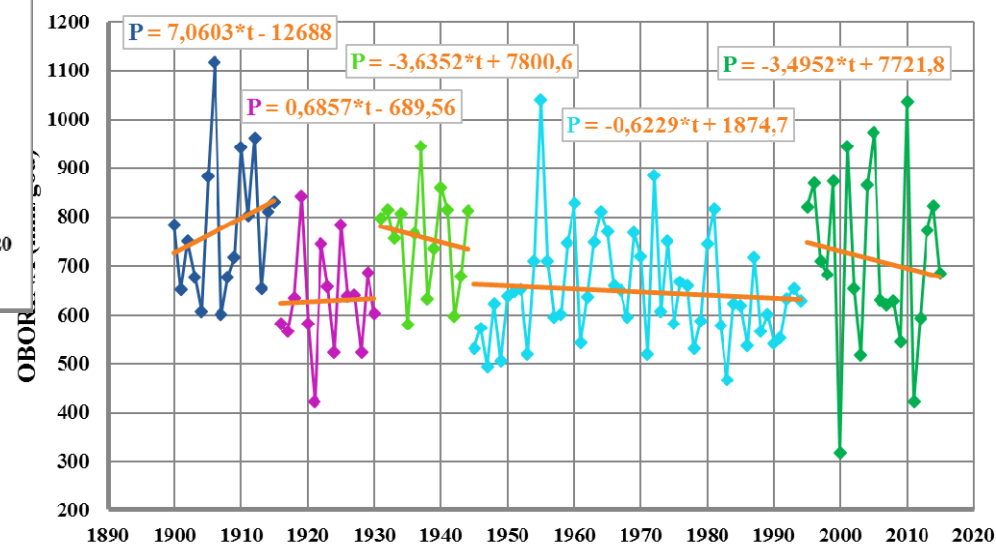


OBORINE (1900-2015)

OSIJEK, 1900.-2015.

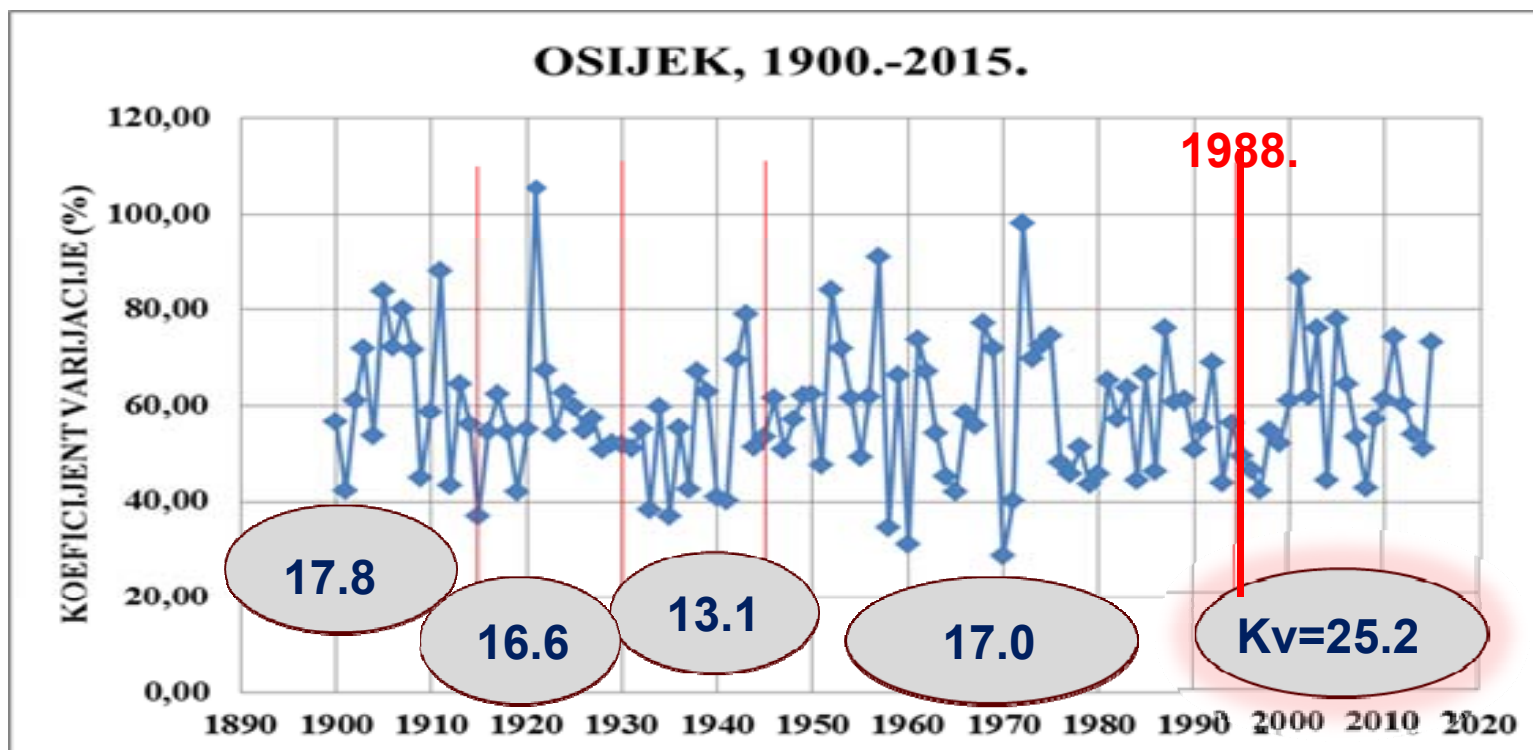


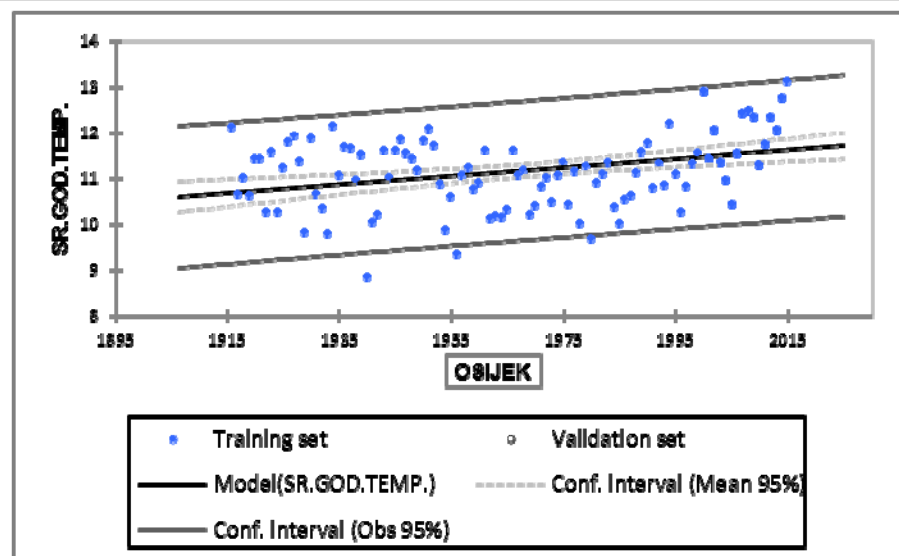
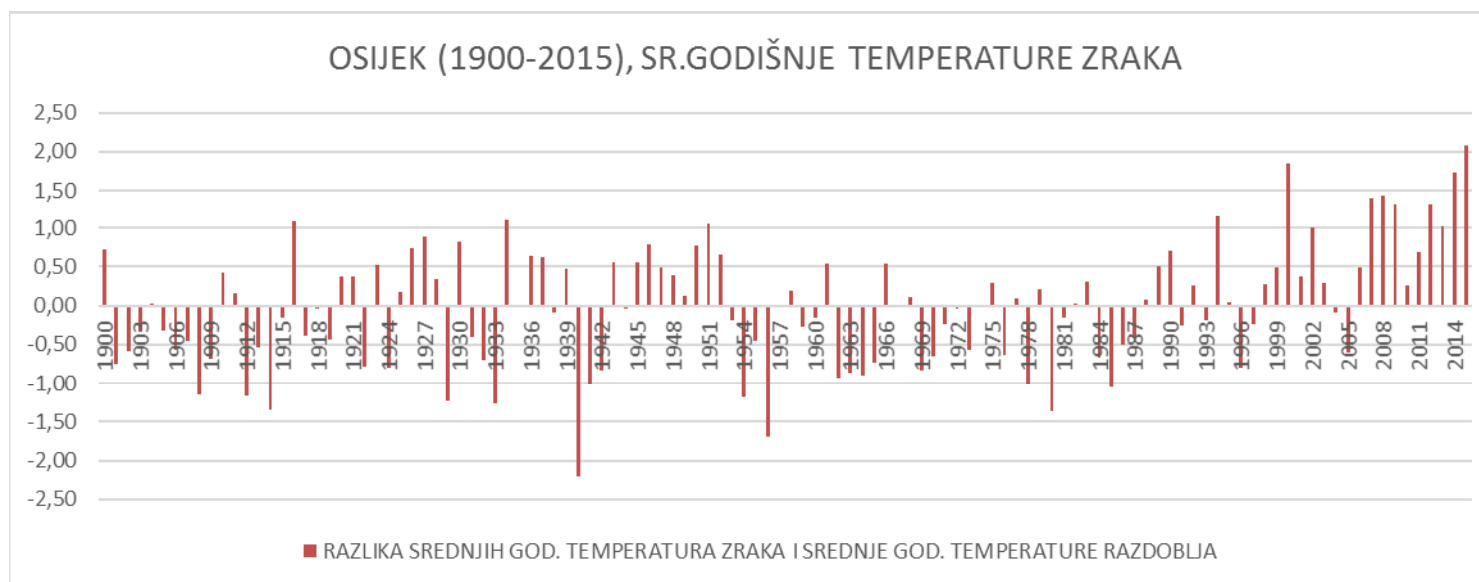
OSIJEK, 1900.-2015.



Varijabilnost temperatura zraka nije statistički značajna

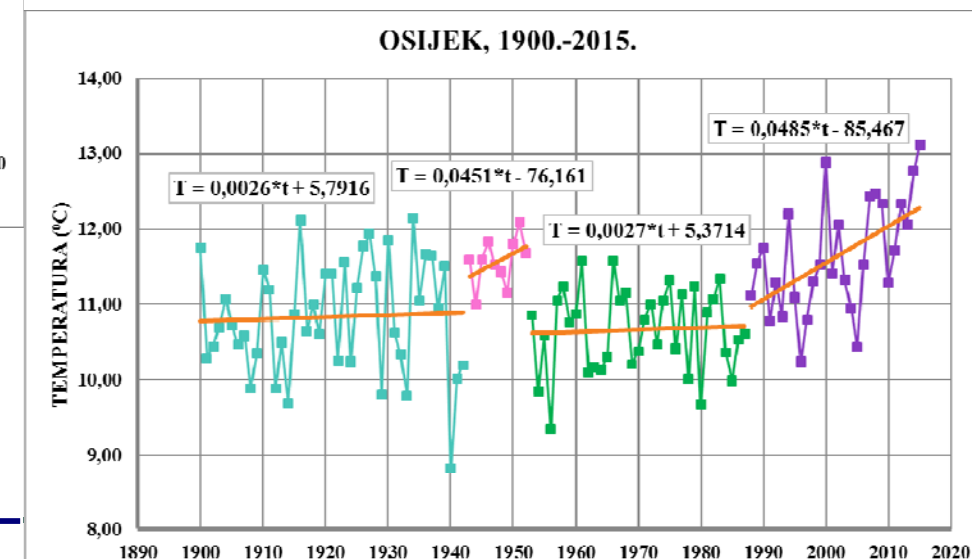
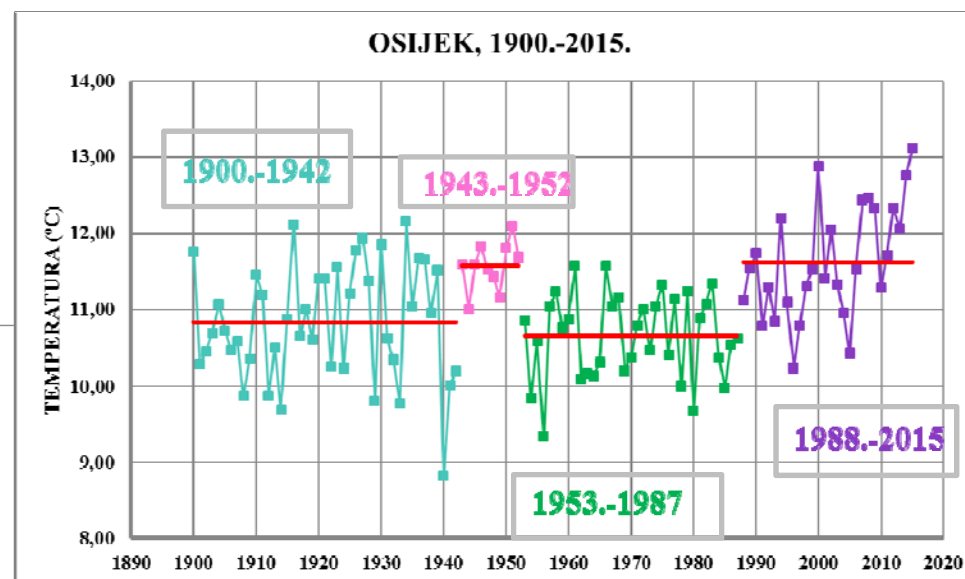
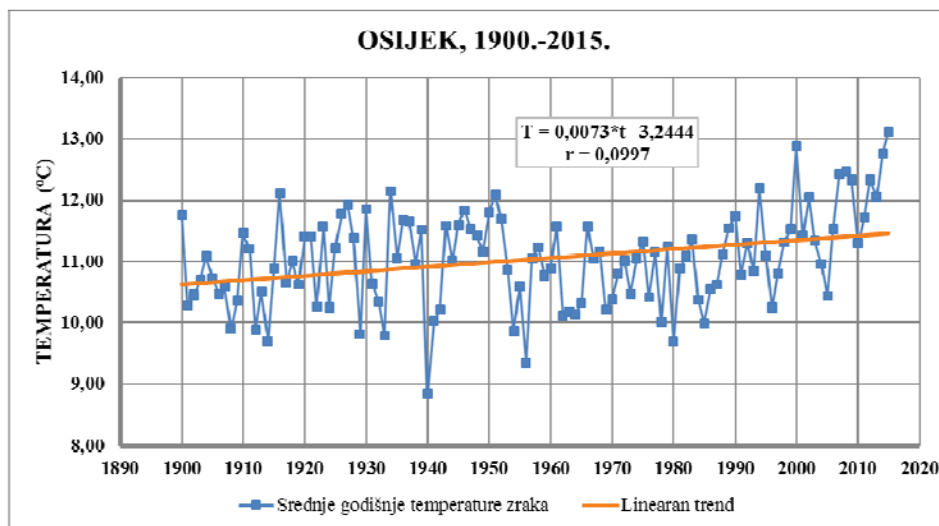
Varijabilnost oborina izraženija posebice u 4.podrazdoblju
(1988-2015)-suše i poplave

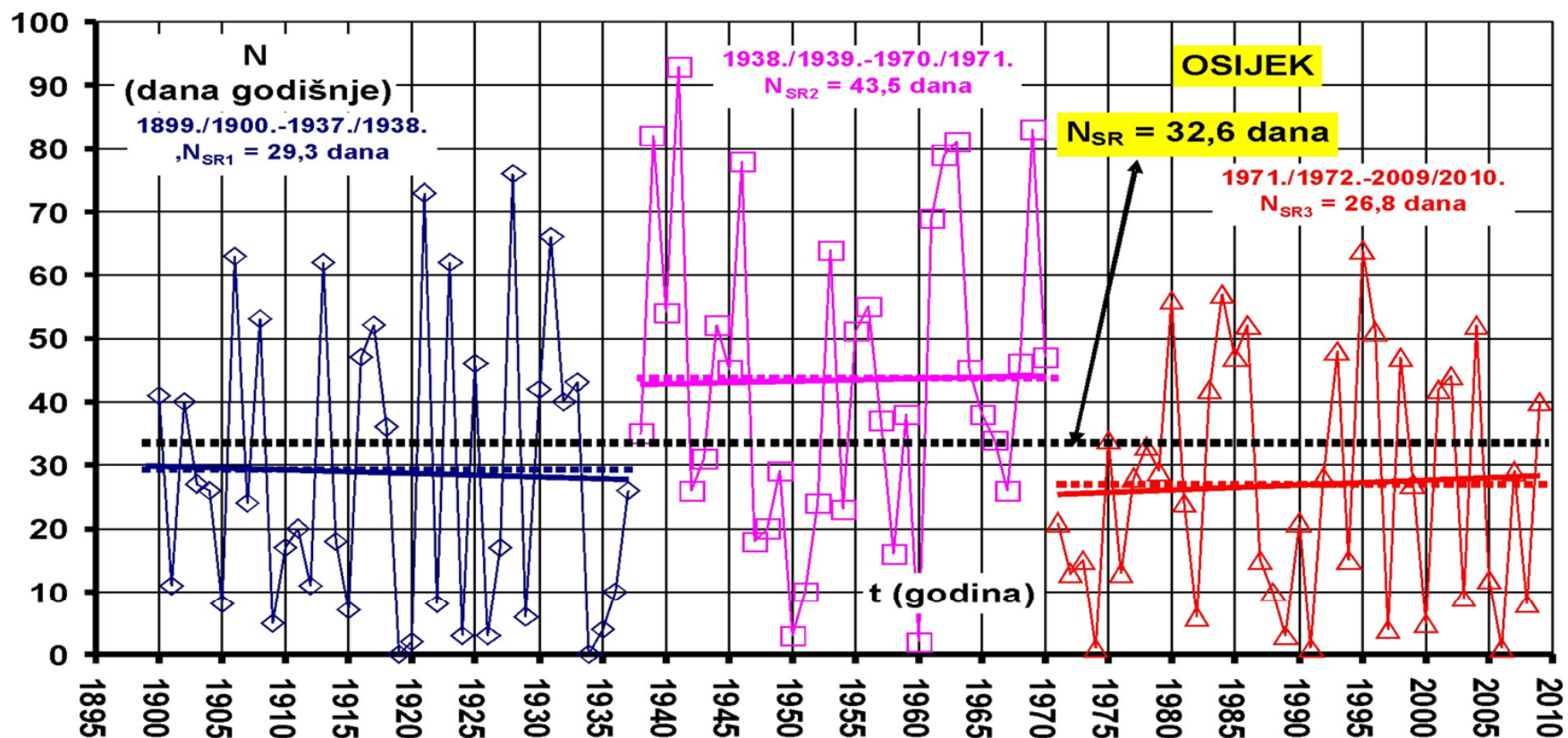






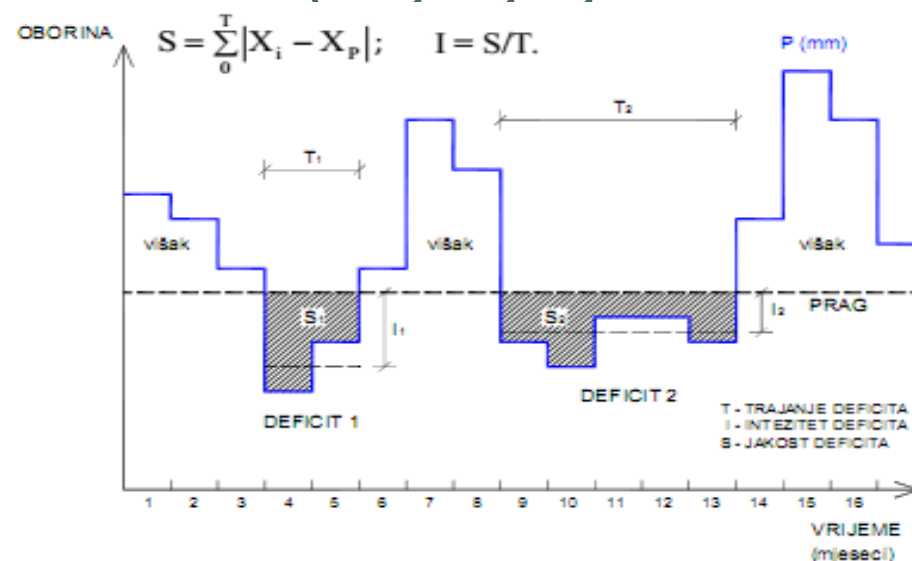
TEMPERATURE ZRAKA (1900-2015)





METODE (INDEXI) ZA OCJENU SUŠE

- PN –postotak od normale
- RAI (Rainfall Anomaly Index).... $RAI = \pm 3 \cdot \frac{P_i - P_{sr}}{E - P_{sr}}$
- METODA KORAKA (trajanje-jakost-intenzitet)



- METODA DECILA

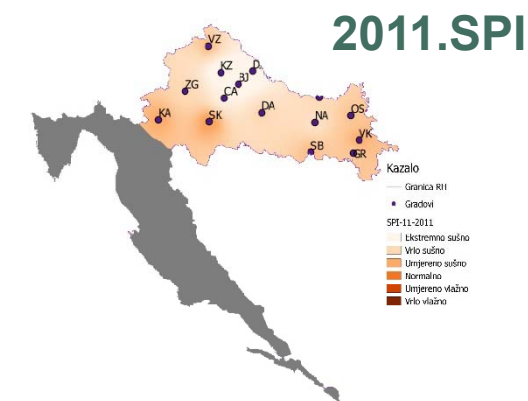
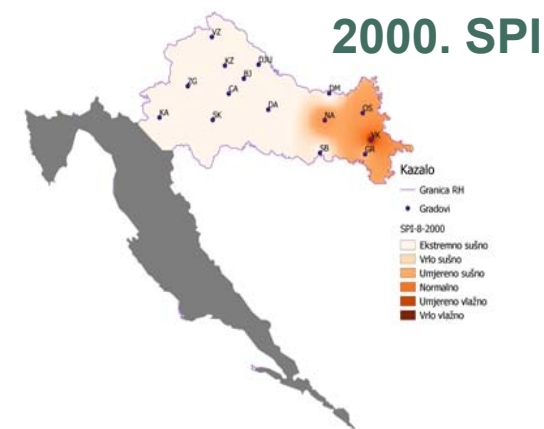
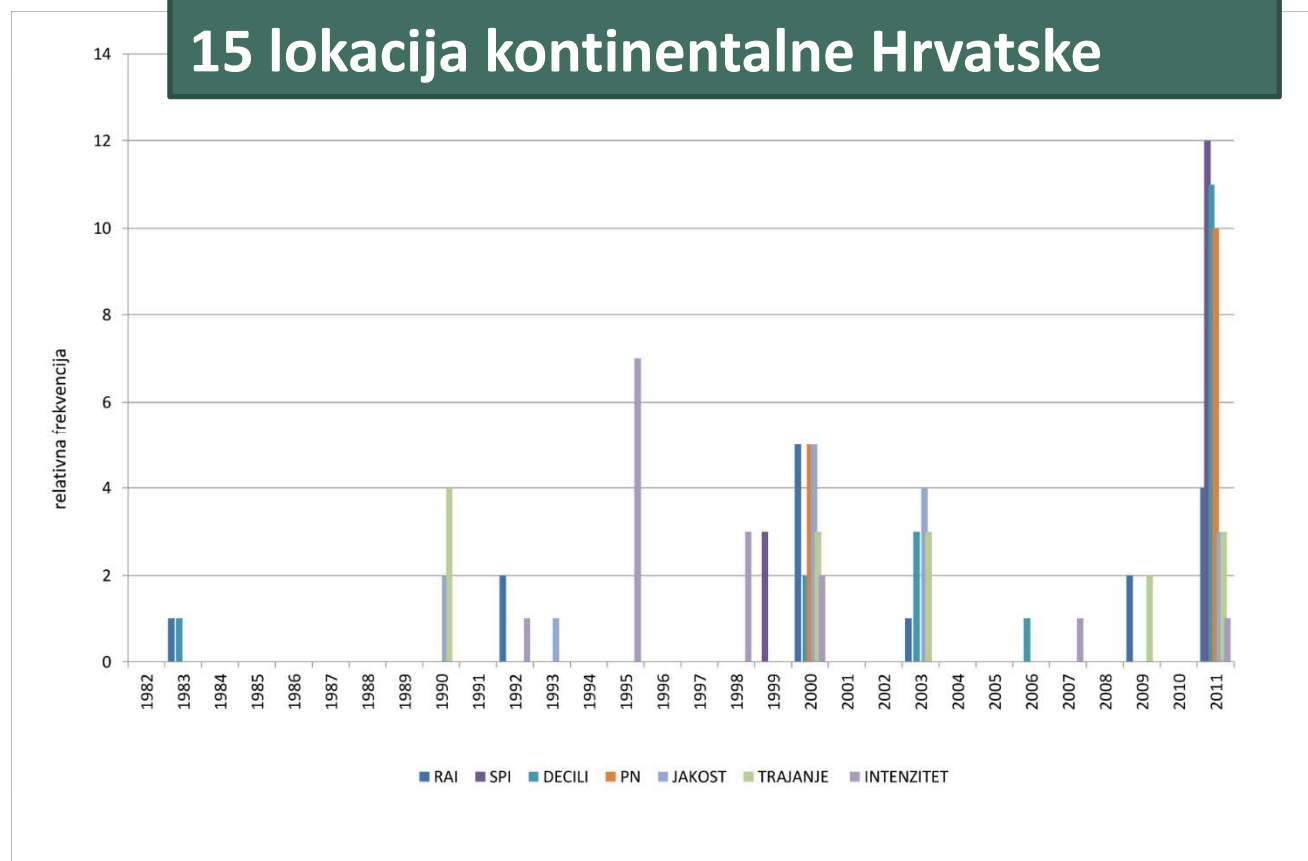
- SPI- indeks standardiziranih oborina (1, 3, 6, 12, 24 mj.)

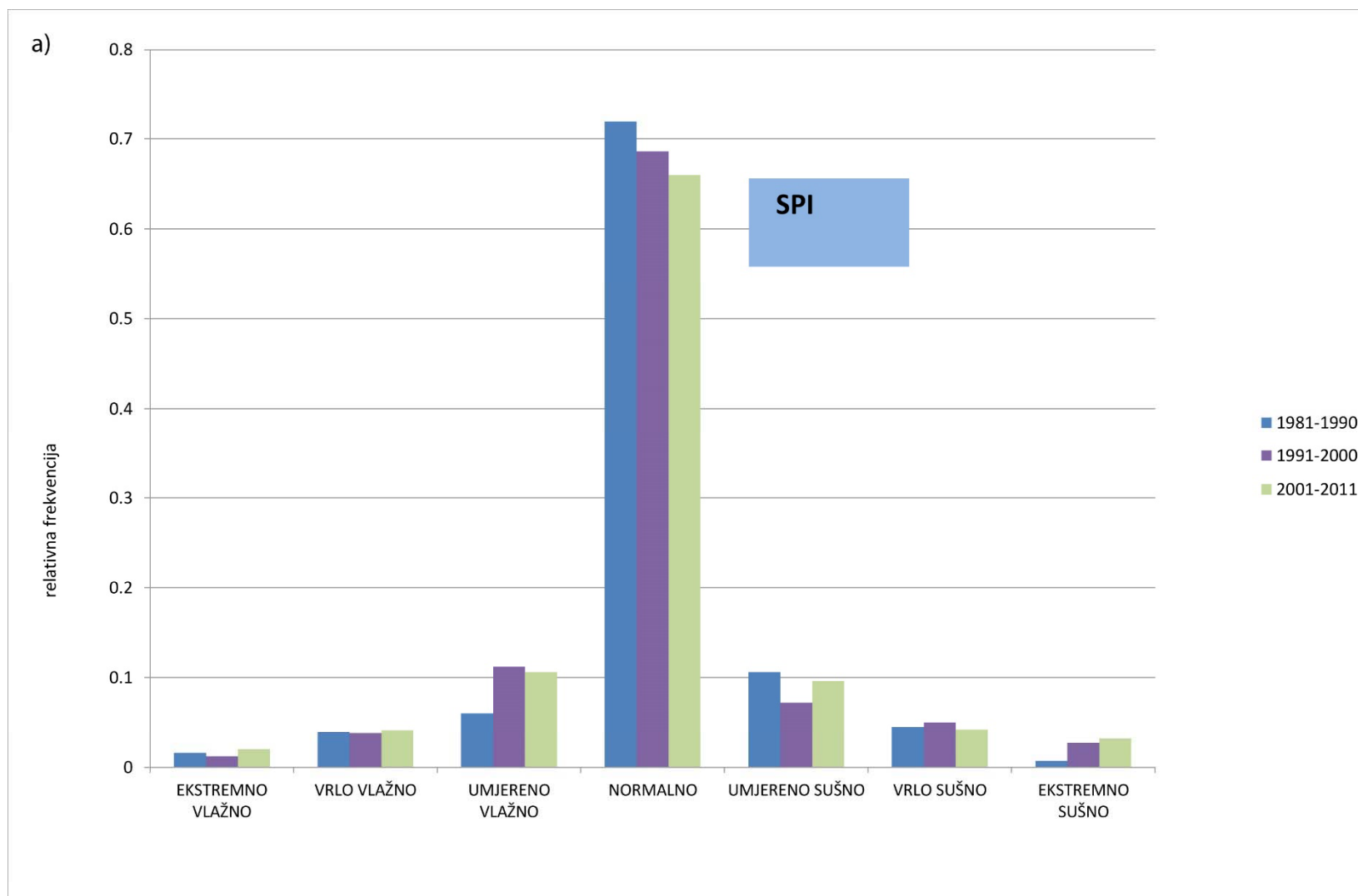
$$\text{SPI} = \frac{1}{\sigma_n} \left(\sum_{i=1}^n P_i - P_n \right)$$

- SPEI-indeks standardiziranih oborina i evapotranspiracije
- SSI-indeks standardiziranih protoka

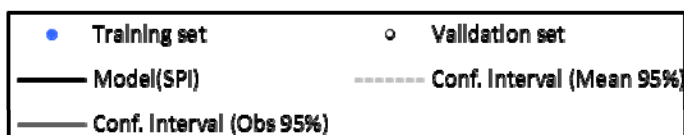
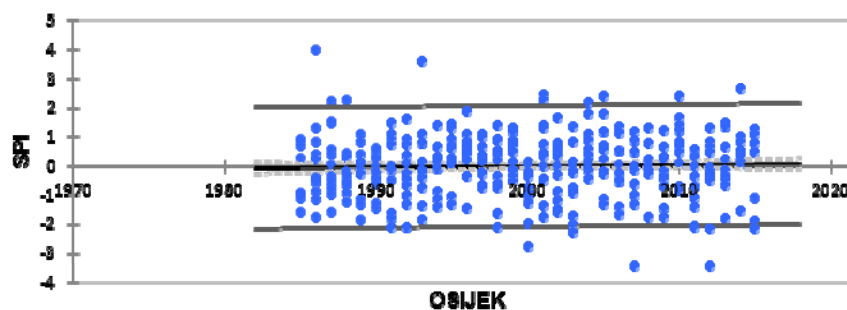
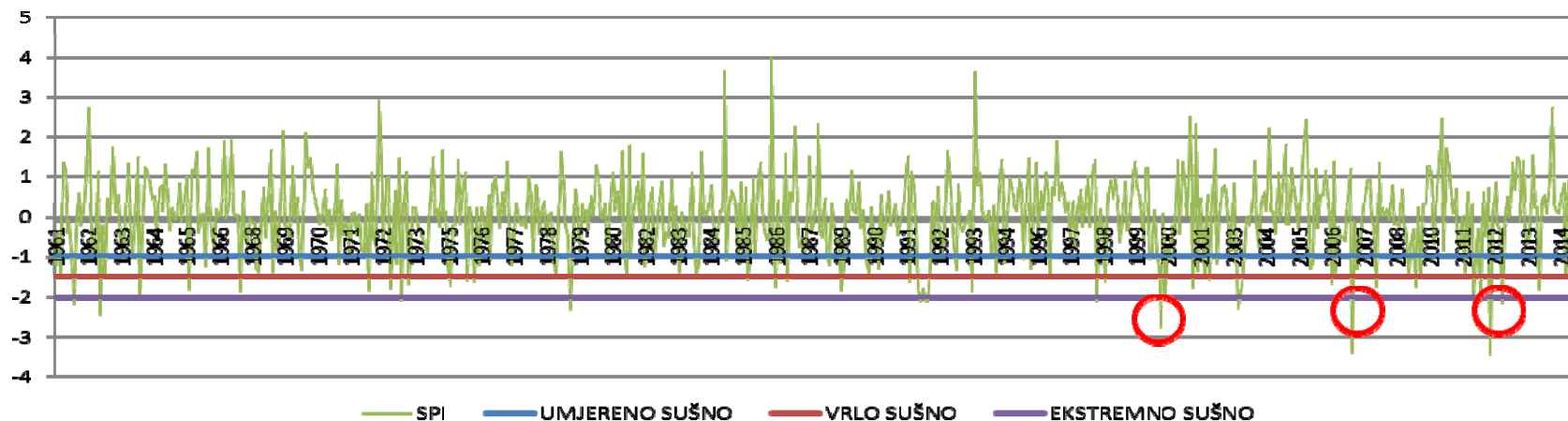


1981-2011.
15 lokacija kontinentalne Hrvatske

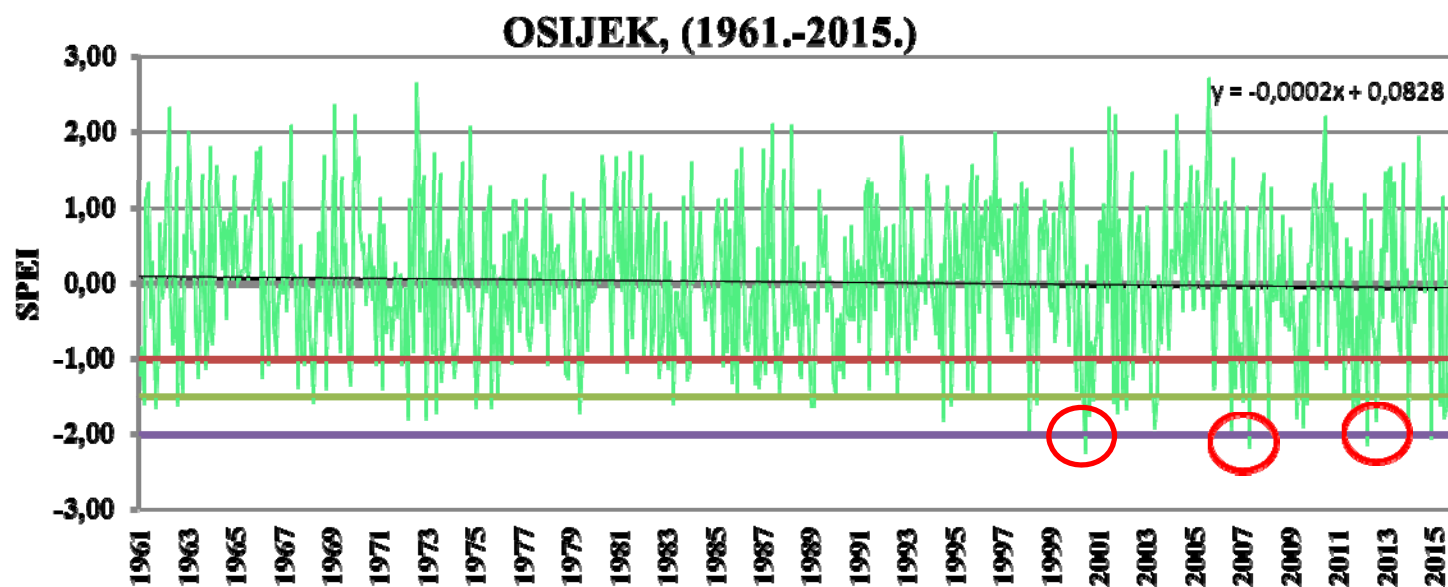




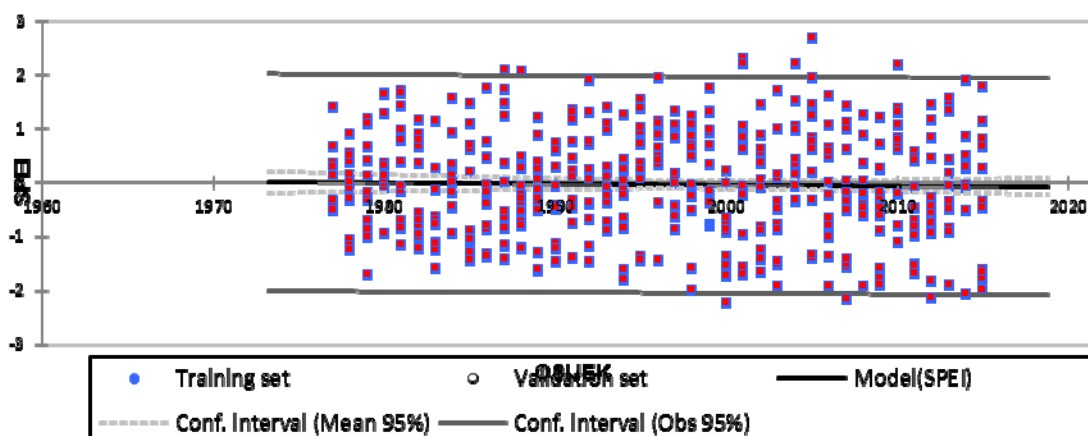
INDEKS STANDARDIZIRANIH OBORINA (SPI), 1961-2015.

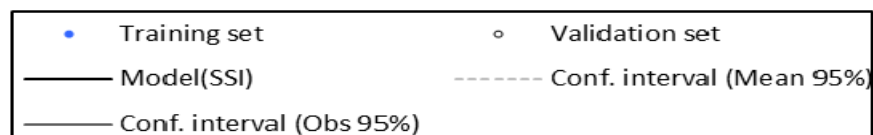
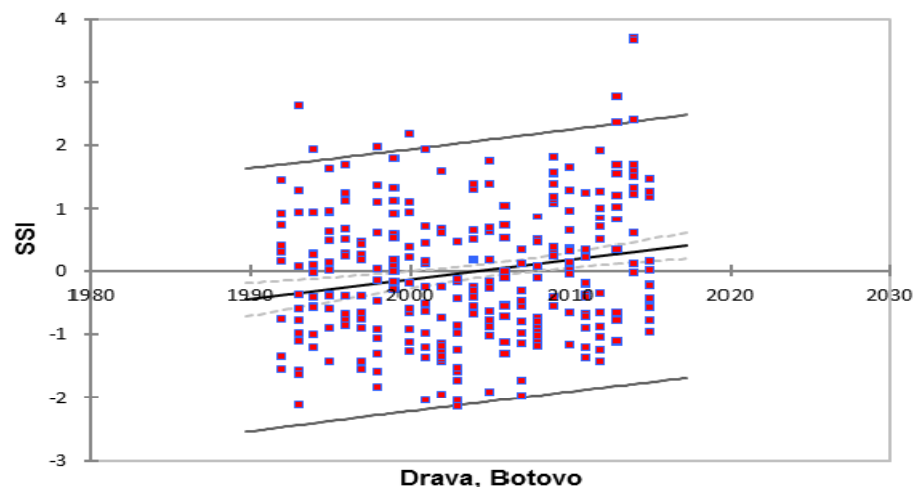


OSIJEK

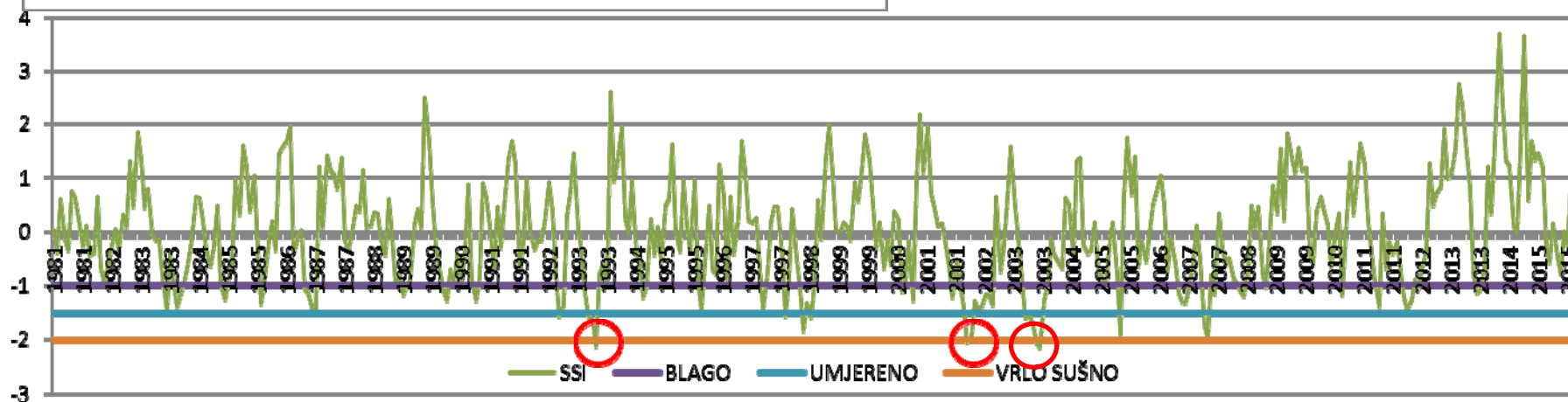


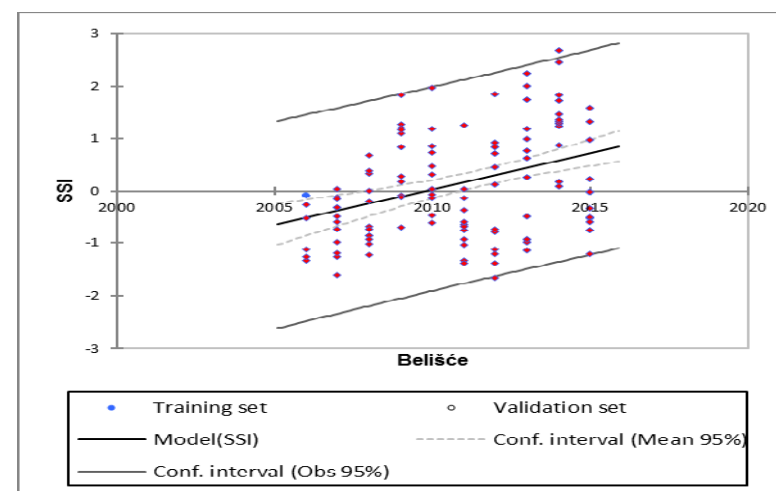
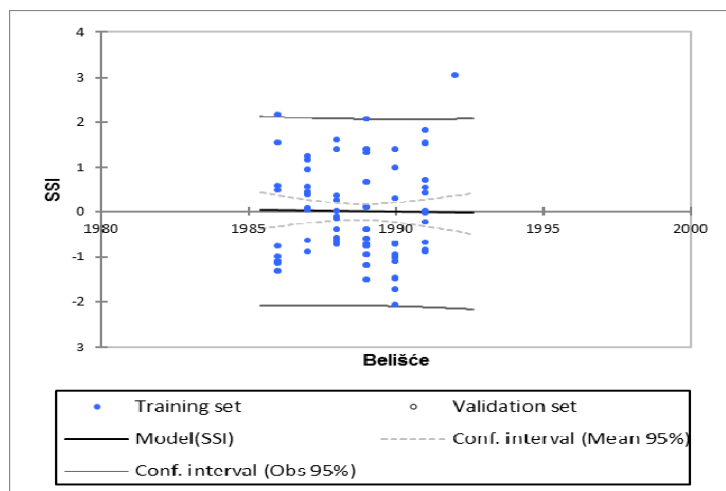
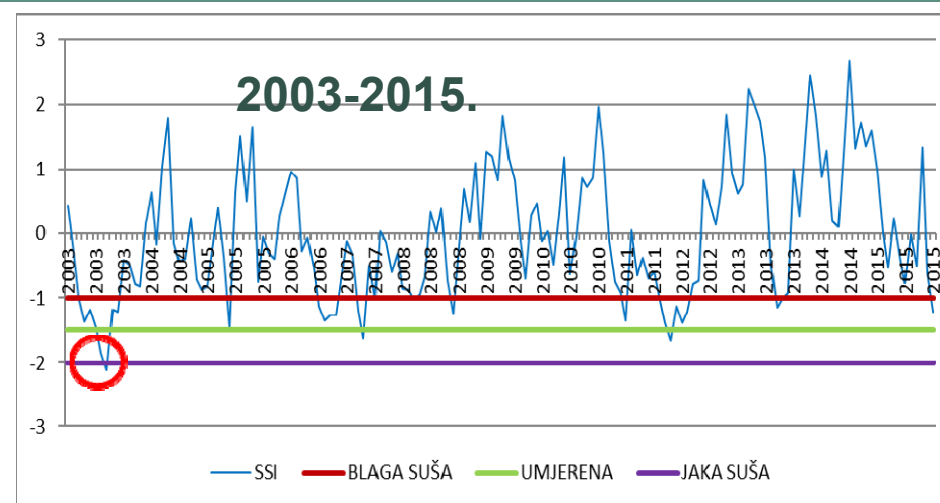
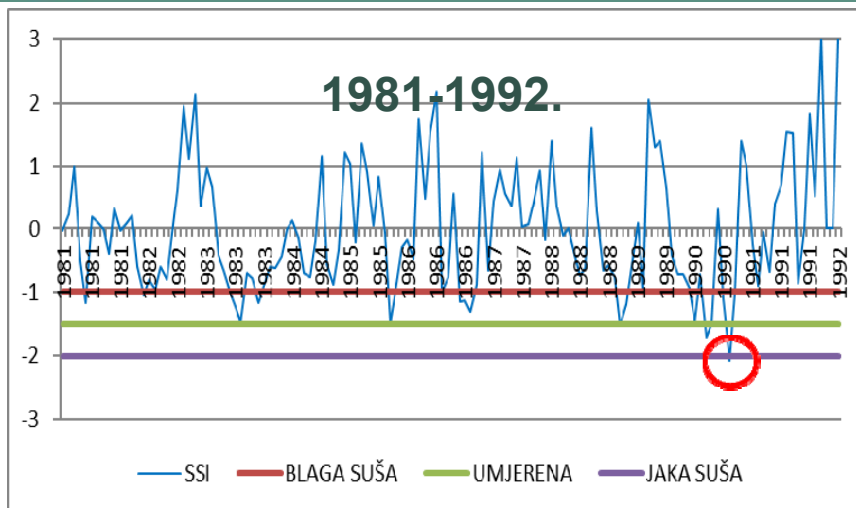
INDEKS STANDARDIZIRANIH OBORINA I EVAPOTRANSPIRACIJE (SPEI, 1961-2015)





INDEKS STANDARDIZIRANIH PROTOKA (SSI, 1981- 2015.)





DRAVA, BELIŠĆE

ZAKLJUČAK

- Rezultati ocjene suše jako ovise o izboru metode/indeksa i dužini raspoloživog niza
- Prikazanim metodama/indeksima analizira se već realizirani događaj
- Za uspješniju borbu protiv suše nužno je razvijati monitoring i predviđanja



HVALA NA POZORNOSTI!