



Use of RS products for drought monitoring

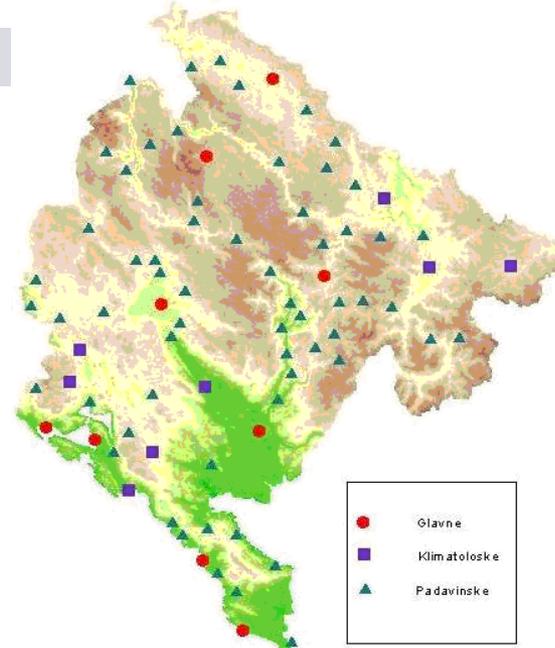
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Training course on the use of satellite products for drought monitoring and agometeorological applications
24-28 April 2017, OMSZ HQ Budapest

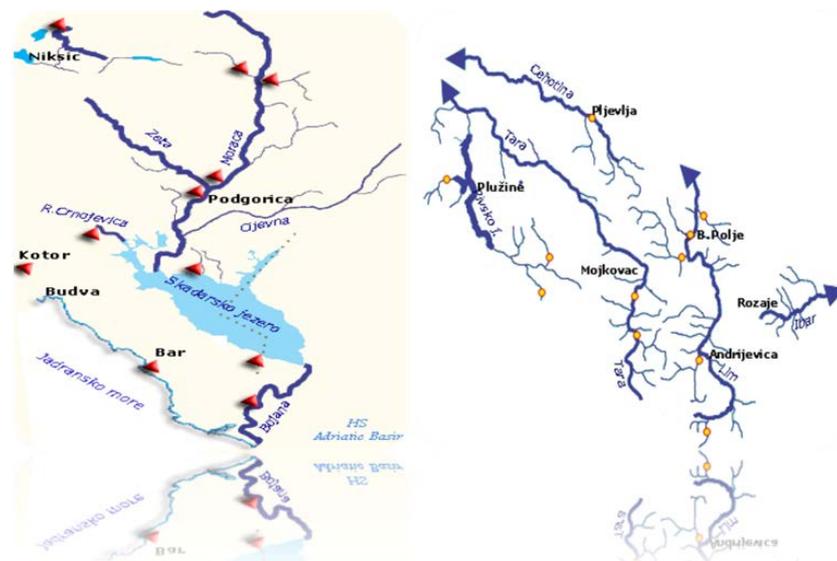


Network of meteorological and hydrological stations

- **Meteorological:**
- Density of the stations 6.88/1000 km² up to 2010;
- 10 main, 18 climatological, 67 rainfall (in 2010);
- **Rapid decrease of precipitation station from 2011 – around 20 currently in function.**
- **Hydrological:**
- 51 stations for water level;
- Part of them automatic on the main rivers of Adriatic and Black sea catchment.



Network of meteorological stations



Network of automated hydrological stations

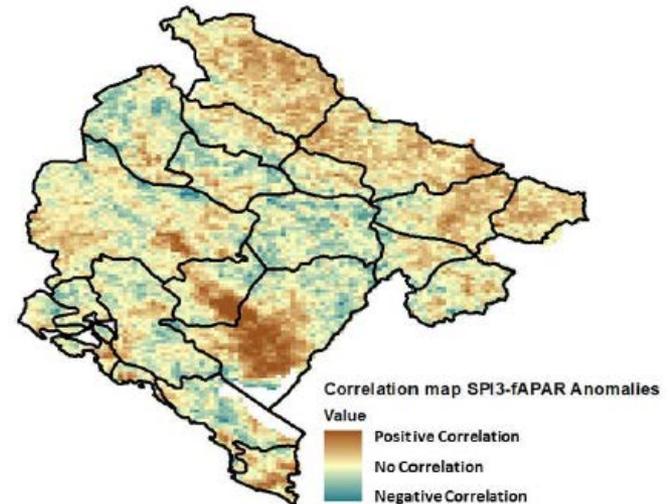
Drought monitoring status

■ Before the project IPA DMCSEE:

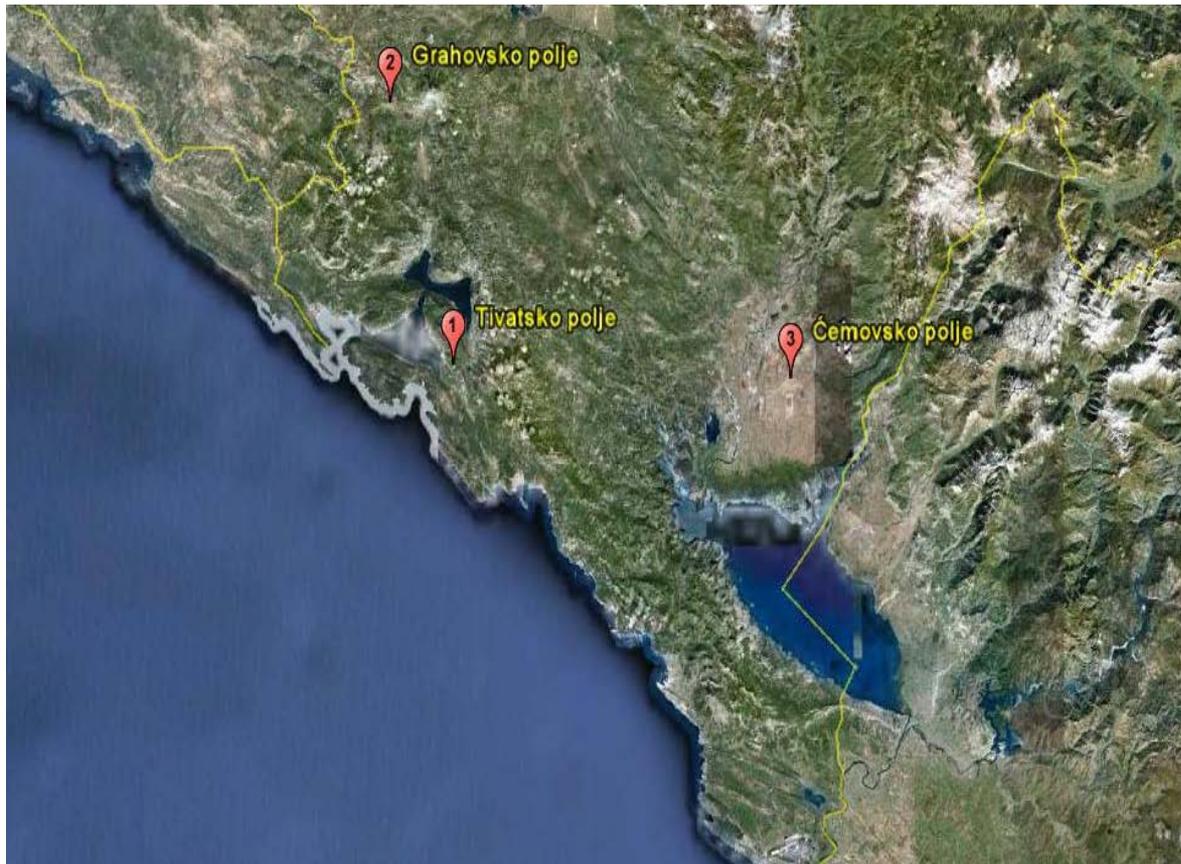
1. no permanent drought monitoring
2. sparse analysis of the drought

■ During and after the DMCSEE project

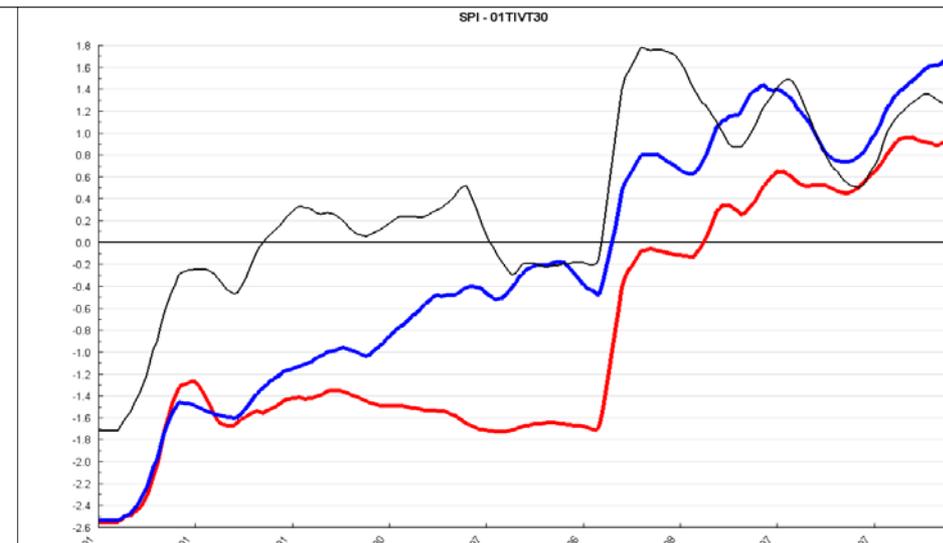
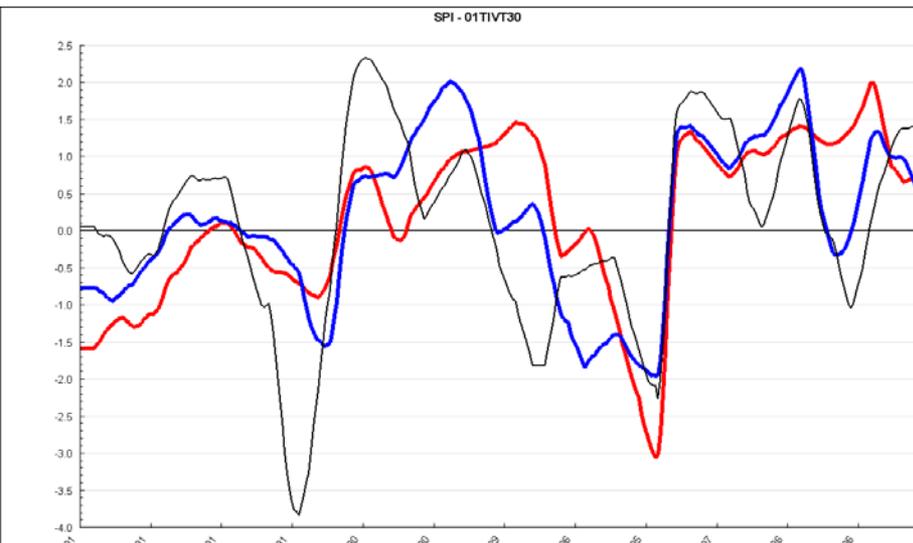
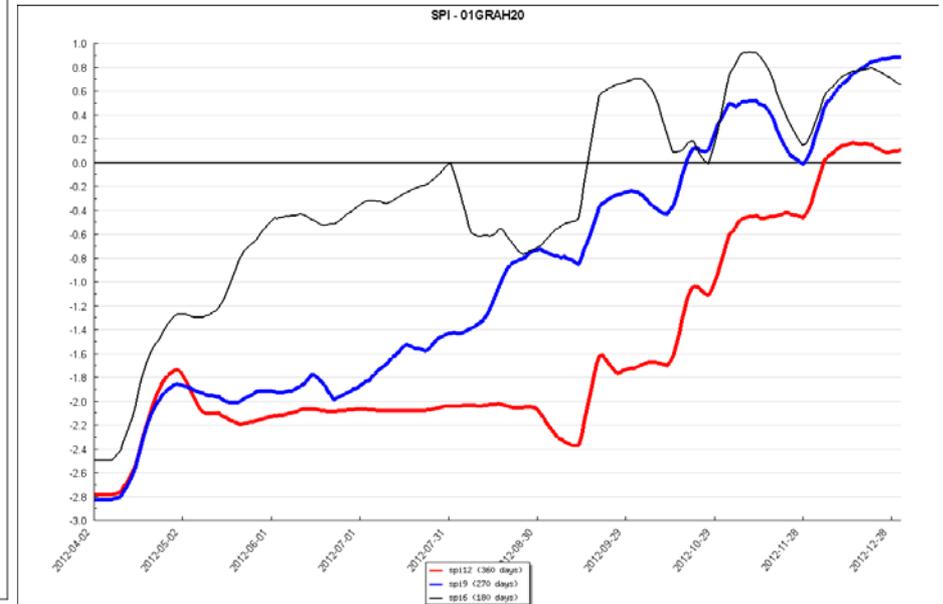
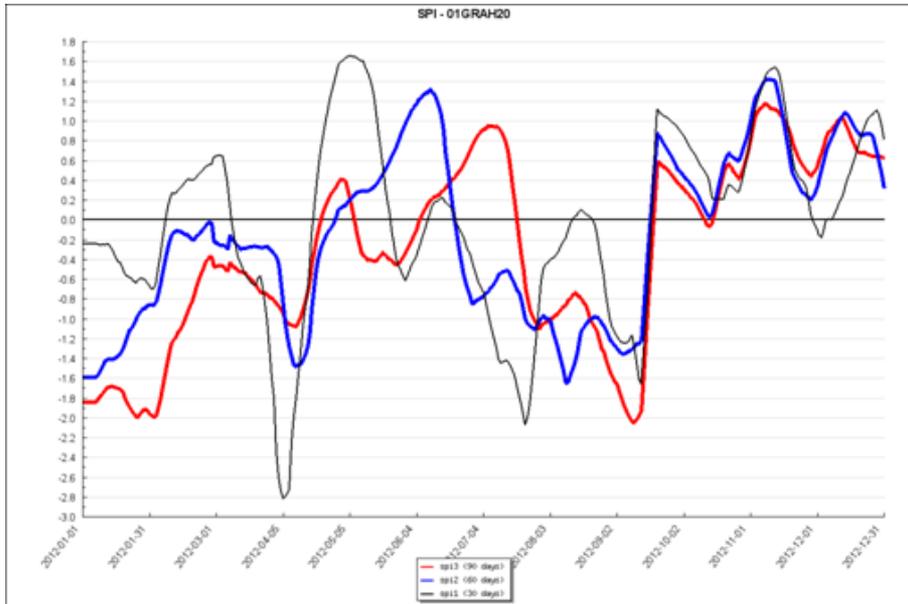
- Permanent drought monitoring based days
- Drought impact archive -created
- vulnerability – assessed
- Use of remote sensing data
- Study report – Drought monitoring with RS in Montenegro (GISMAP Simone Rossi, IHMS) – tested the potential of use of RS (FAPAR anomalies and SPI3)
- Training on use of WINISAREG software for irrigation scheduling
- Training in the DMCSEE regarding the RS:
 - in 2013 (drought hazard analysis and mapping, using LSA SAF products, Portugal) and in 2014 secondment of experts (RS by LAI and FVI) both within WMO project “Building Resilience to Disasters in Western Balkan and Turkey”



SECONDMENT in DMCSEE Drought monitoring by SPI,FVC,LAI indices



Primjer: SPI iz dana u dan 17-31. avgusta 2012



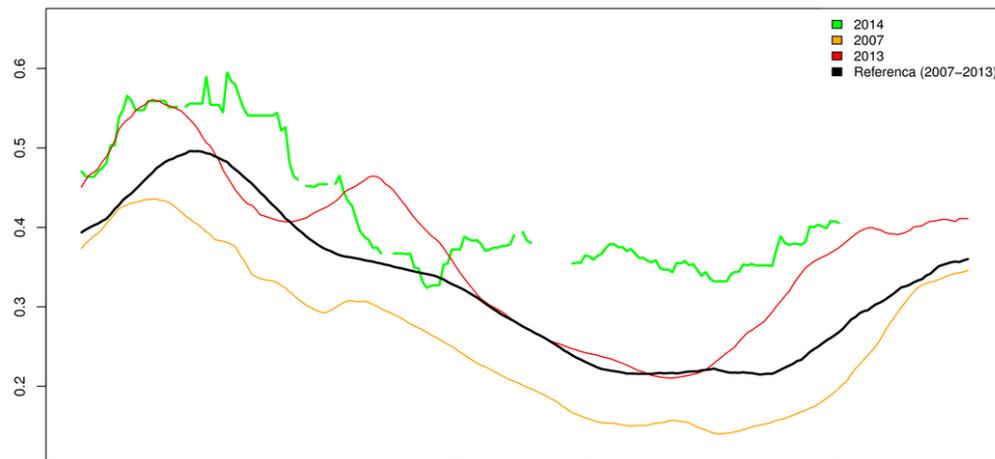
Primjer: satelitski podaci- indeksi FVC i LAI za oblast Plantaža (blizu Golubovaca)



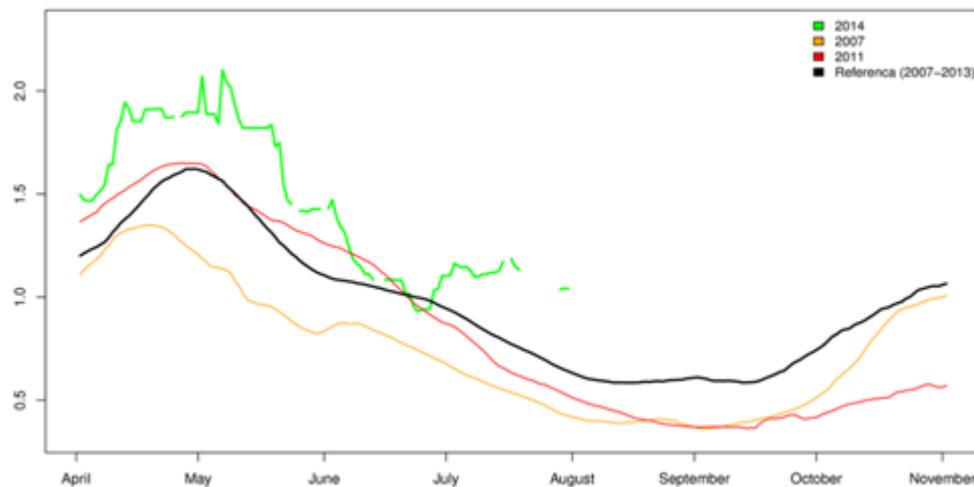
Study area 4x4 km

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Indeks FVC: Podgorica/Plantaze (20140930)



Indeks LAI: Podgorica/Plantaze (20140730)



Emergency relief and drought response

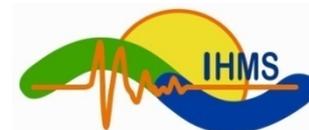
- Organized delivery of water in affected areas (cisterns with water)
- Support to ranchers and milk producers by the Ministry of Agriculture and Rural Development

Mitigation Practices in agricultural sector	Mitigation Practices in hydrological sector	Drought management	Drought Master plan
Irrigation - fragmented	Drainage system, reservoirs, dans	no	no

Synoptic table on mitigation practices
In drought period

GAPS:

- Lack of drought management and Drought Master Plan
- No policy / strategy related to the drought
- No drought authority
- Drought monitoring should be more integrated and coordinated between final beneficiaries and IHMS



Membership

- **WMO** - full member
- **IHO** - full member
- **IPCC** - full member
- **EUMETNET** - full member
- **ECMWF** - cooperating state
- **EUMETSAT** - not member yet
- **ESSL** - full member
- **EUMETCAL** - full member



Current access and usage of EUMETSAT data

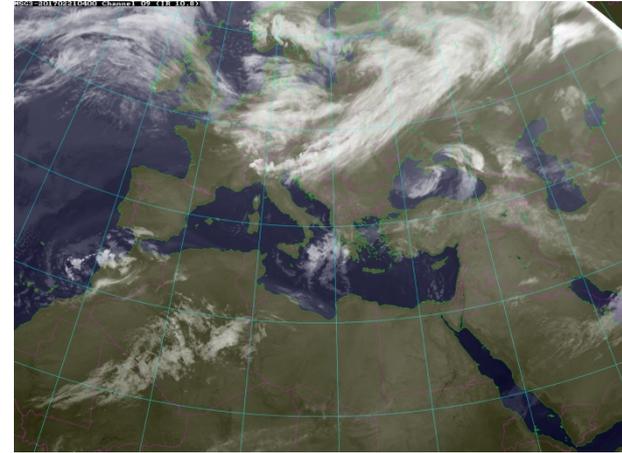
- At the moment it is possible to use available data from the EUMETSAT's website



www.hmz.gov.me;
office@meteo.co.me



Operational status of the DAWBEE station



- DAWBEE station was procured within WMO IPA project “*Building Resilience to Disasters in Western Balkan and Turkey*”
- In October 2015 IT staff replaced an old Hard Disk with new one, reinstalled operating system and installed all supporting software (MSGProc and ViewMSGProc)
- In January 2017 we have successfully installed new Ayecka SR1 DVB-S2 Receiver regarding that the previous Ayecka SR1 DVB-S2, which we received through EUMETSAT support in September 2014, was out of operation

Ongoing projects

- DriDANUBE – Drought risk in Danube region
- Lead partner – Slovenian Environment Agency

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THANK YOU

