

Activities of UN-SPIDER RSO in Ukraine in 2012



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Vienna, Austria

Activities in 2012



- ***Outreach and Capacity Building***

- Contribution to UN-SPIDER Newsletter

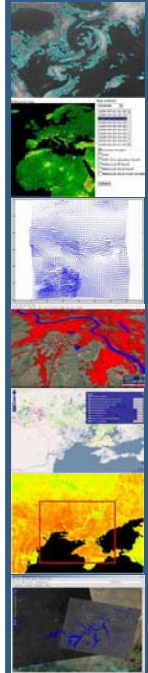
- August and September 2012

- Topics

- *operational forecasting of winter wheat yield in Ukraine for 2012 based on Earth observation*
- Conference “*Earth Observations for Sustainable Development and Security*” (GEO-UA 2012) and *UN-SPIDER training session*
- *International Charter Call to Cameroon*

- Scientific publications

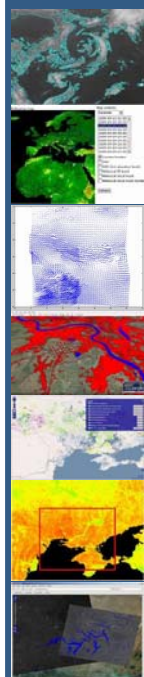
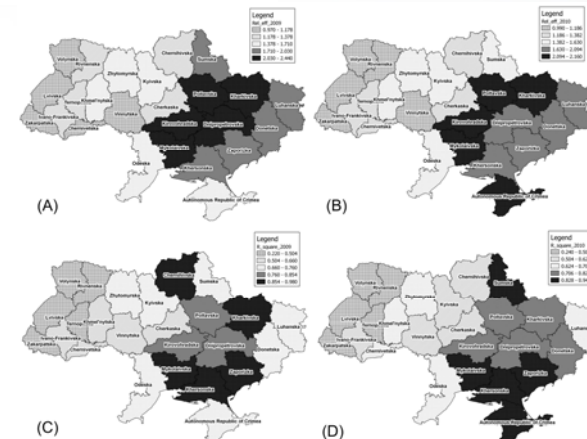
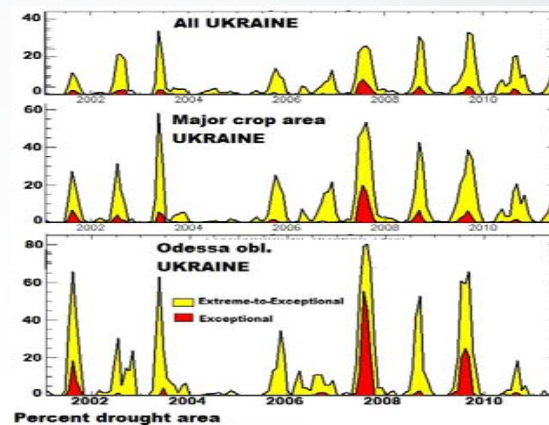
- Paper on Namibian SensorWeb project in **IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing (J-STARS)**
- **Kussul N., Mandl D., Moe K., Mund J.-P., Post J., Shelestov A., Skakun S., Szarzynski J., Van Langenhove G., Handy M.** “Interoperable Infrastructure for Flood Monitoring: Sensor Web, Grid & Cloud”, 2012, vol. 5, no.6, pp. 1740-1745.



Activities in 2012 – cont'



- **Outreach and Capacity Building**
 - Participation in United Nations International Conference on Space-based Technologies for Disaster Management "Risk Assessment in the Context of Global Climate Change" 7 to 9 November 2012, Beijing, China (under support from UN-SPIDER)
 - Presentation on “The use of satellite data for drought monitoring & food security in Ukraine in the context of climate change ”



Activities in 2012 – cont'



- **Horizontal Cooperation**

- Flood risk assessment
 - Sich-2 and EO-1 satellite images feature ice cover on the Dnieper river with the hole made to keep ice away from the hydroelectric power station and dam.
 - Images acquisition date is 17 March 2012
 - The average ice depth was ~40 cm.



Fig. 1. Fragment of EO-1/ALI image over the Kyiv area acquired on 17 March 2012. The image is presented in false color. Spatial resolution is 30 m. Data courtesy of the NASA Earth Observing One (EO-1) mission operated by the Goddard Space Flight Center.

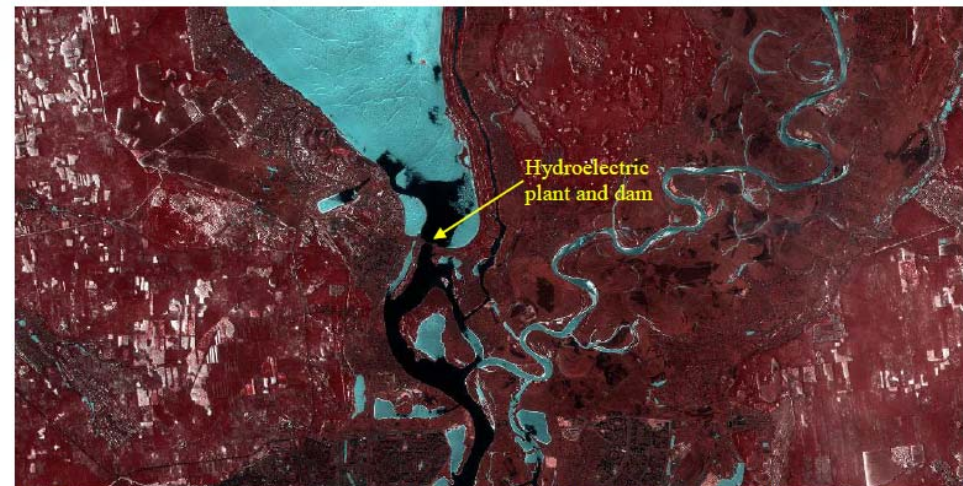
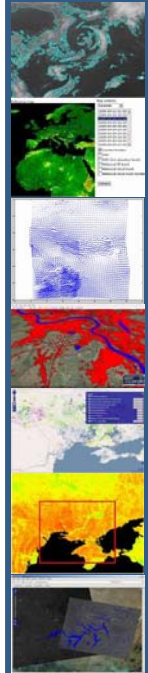


Fig. 2. Fragment of Sich-2 image over the Kyiv area acquired on 17 March 2012. The image is presented in false color. Spatial resolution is 8 m. Data courtesy of the State Space Agency of Ukraine.

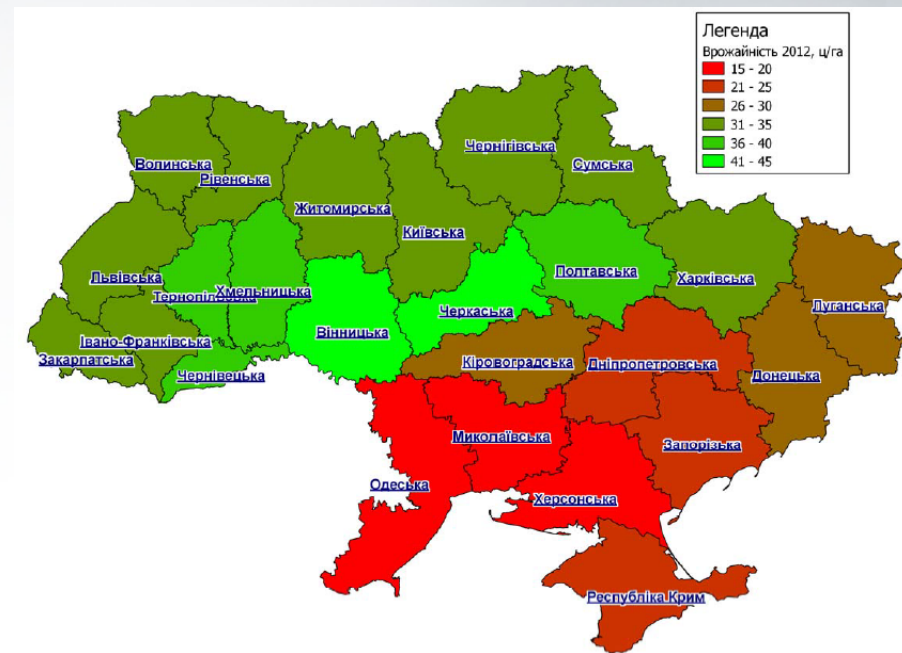


Activities in 2012 – cont'



- **Horizontal Cooperation**

- Operational forecasting of winter wheat yield in Ukraine for 2012 based on Earth observation
- Results delivered to the Department of Agriculture of Ukrainian Hydrometeorological Center
- Published in article: Kogan, F., N. Kussul, et al. **“Winter wheat yield forecasting in Ukraine based on Earth observation, meteorological data and biophysical models”** *International Journal of Applied Earth Observation and Geoinformation*, 2013.

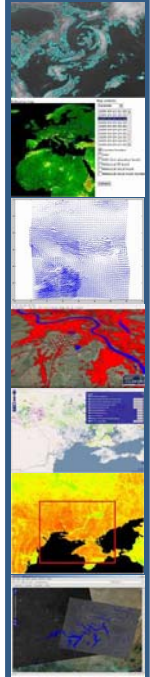
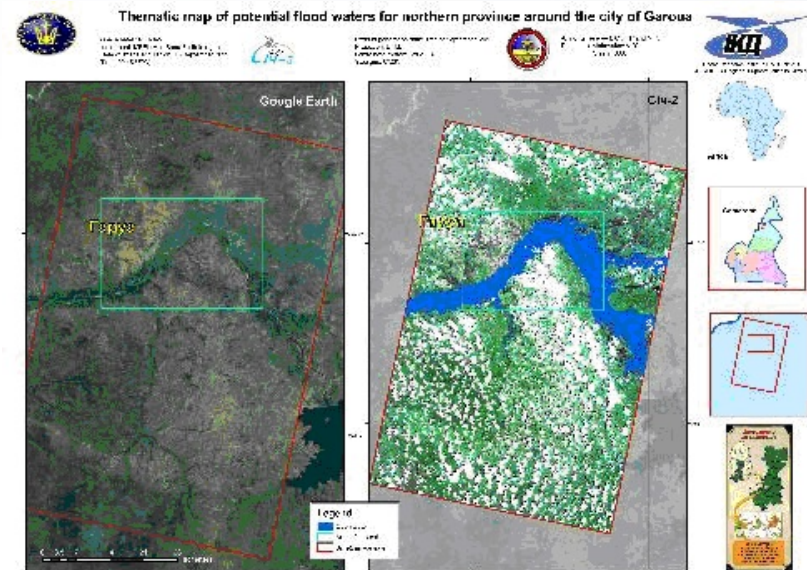
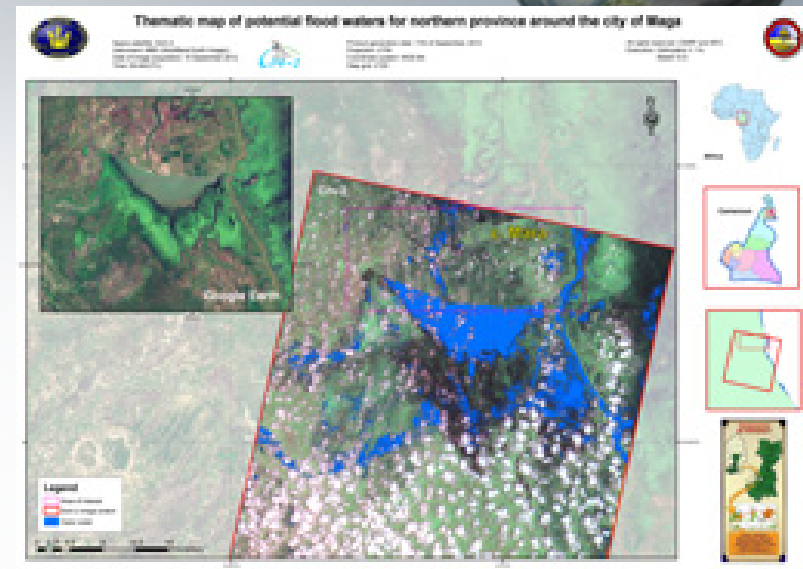


Activities in 2012 – cont'



- **Horizontal Cooperation**

- International Charter Call for Cameroon, September 2012
- The operation flood mapping from Sich-2 satellite
- The following images were acquired:
 - 10 September 2012 over city of Maga
 - 15 September 2012 over city of Garoua





Thank You!

