## Copernicus Programme for geo-literacy improvement

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"Copernicus - the road to economic development" conference, 26-27 February 2015 Copernicus Science Centre, Warsaw

## **Geo-Literacy**

LITERACY is about communication GEO-literacy – a new term for a long-standing idea consisting of three components:



Source: Copernicus Programme, www.copernicus.eu

interactions, interconnections and implications.

GEO-literacy – the ability to **take** geographical information, such as satellite imagery, maps or Copernicus services, **critically analyze** and **make meaning** of it and then **base decisions on** the newly formed knowledge, to make the best decisions possible about our environment, resources and populace.



### Copernicus - the road to economic development

- Copernicus a European system for monitoring the Earth.
- Offers commercial and public policy application

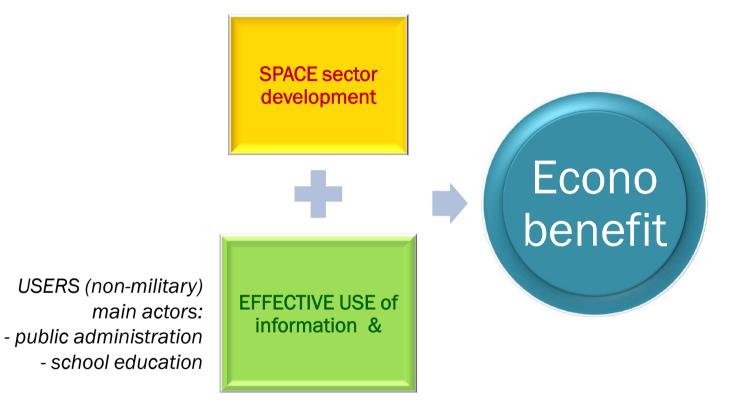
The objective is to optimize and coordinate the use of multiple-source data to get a timely and quality information, services and knowledge, and to provide autonomous and independent access to information, particularly in relation to environment and security.



Economic development respecting the sustainable development rules



### **COPERNICUS & Geo-literacy**





# UNEP/GRID-Warsaw Centre **mission**

fostering use of geoinformation and remote sensing in:

- environmental management,
- biodiversity protection,
- climate change mitigation,
- capacity building and environmental education.



## UNEP/GRID-Warsaw Centre Partnerships and Memberships

- Member of the UN System as the Polish node of the UNEP-initiated GRID (Global Resource Information Database) network
- RCO Mazovia recommended by the Marshall
- Member of European Citizen Science Association (ECSA)
- National Centre of Excellence, digital-earth.eu network
- Member of the Geographical Information Systems International Group (GISIG)
- Supporting member of the Polish Association for the Spatial Information (PASI)
- Member of the ICA/ Open Source Geospatial Foundation (ICA OSGeo) Labs
- GLOBE Program national coordinator
- Member of the Partnership for Climate initiative in Poland
- Partnership with the Employers of Poland organization



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## UNEP/GRID-Warsaw Centre Selected activities

- ESA's Geospatial Services for environmental management in Poland, 2012-2014 (ESA PECS: Plan for European Cooperating States)
- **EEA environmental assessments** involvement and contribution
- **GLOBE** (Global Learning and Observations to Benefit the Environment) Program
- CASCADOSS Development of a transnational cascade training programme on Open Source GIS&RS software for environmental applications, 2007-2009 (EU's 6<sup>th</sup> Framework Programme)



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## **Public administration**

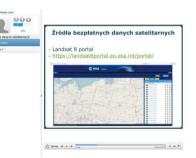
#### **ESA's Geospatial Services** for environmental management in Poland (2012-2014)



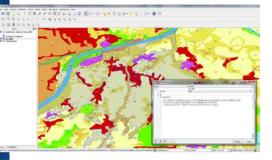








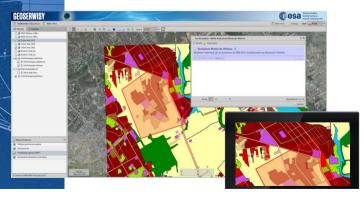
Online training on remote sensing and Copernicus **Programme services** http://e-platforma.gridw.pl



Selected services and geospatial products



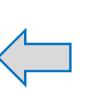
**Dedicated system** (geoportal & mobile app.)



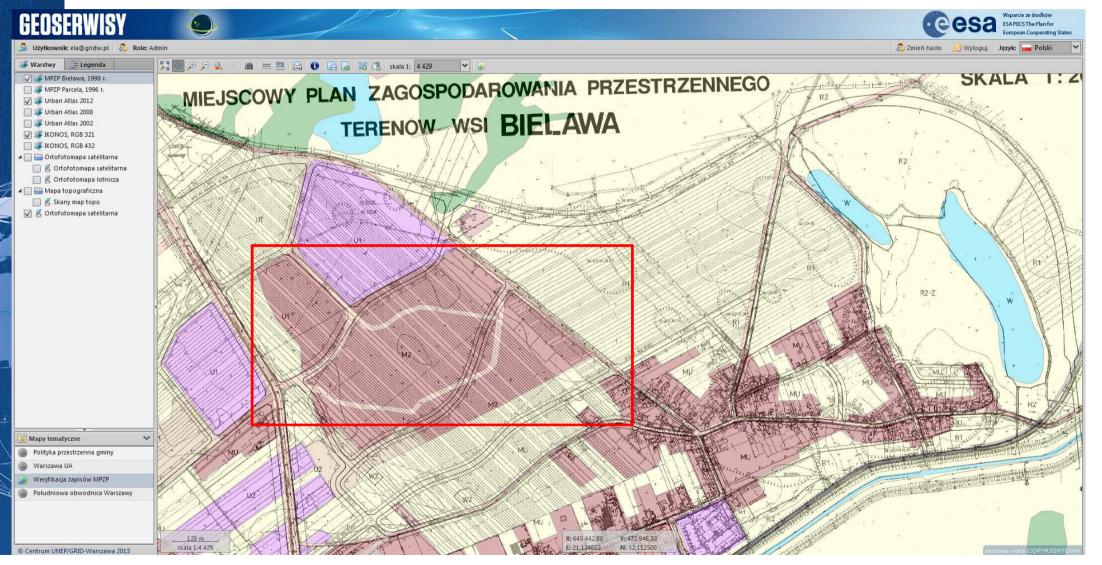


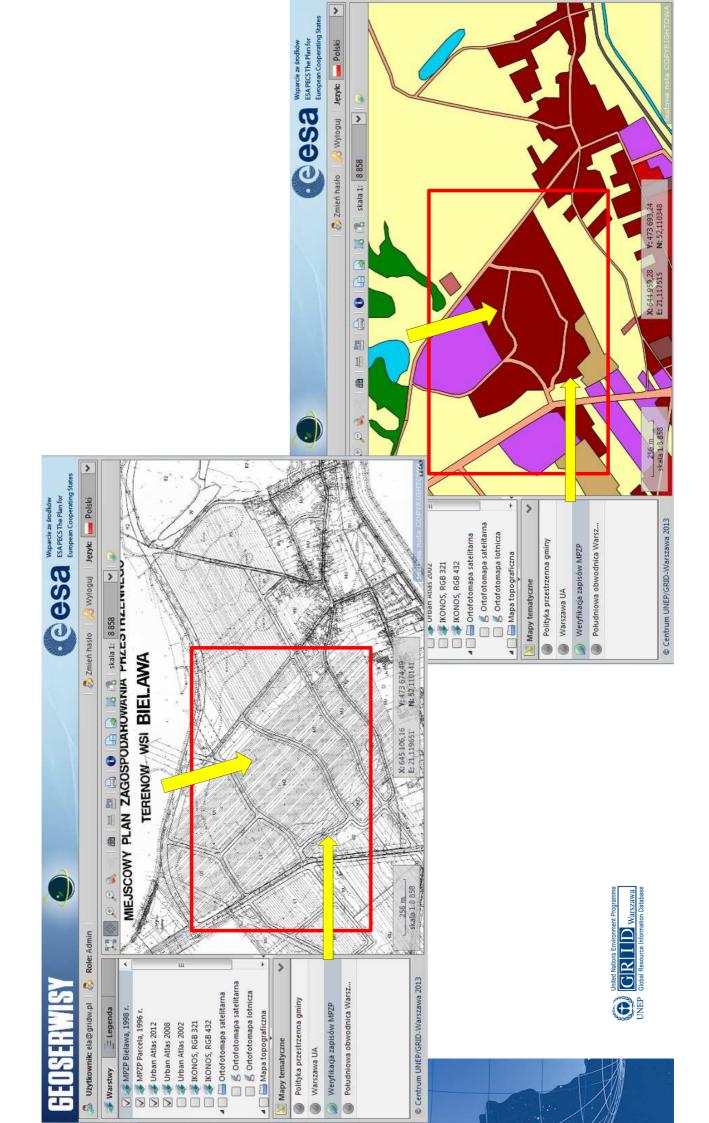
specific case-studies (scenarios) related to environmental manangement, spatial planning and crisis management issues, for example:

- Monitoring of urban areas development
- Monitoring of local spatial planning policy
- Mapping changes of selected non-forest habitats within Natura 2000 sites
- Flooded areas mapping in selected areas of Poland



## Scenario: Monitoring of urban areas development









## Scenario: Mapping changes of high value habitats (within Natura 2000 sites)





## **School education**



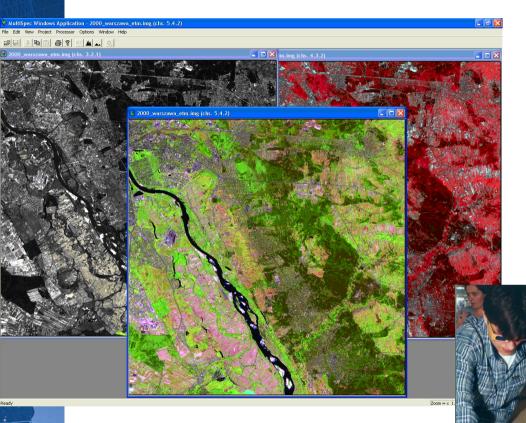
- **GLOBE program** (The Global Learning and Observations to Benefit the Environment)
  - Land cover identification in the area around the school

with the use of MUC classification system;

- Land cover changes in the past 25 years;
- Climate from space remotely sensed data for climate analysis.



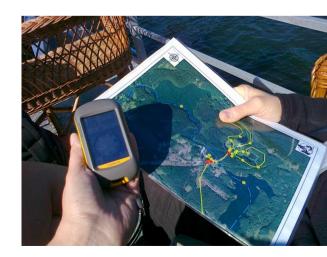
### Land cover changes



#### Methodology:

- visual interpretation and manual mapping
- computer processing for more advanced participants
- land cover change analysis

#### Potential to use **Sentinel data (Sentinel-2)** to assess land cover and land cover changes.





## **Areas for cooperation**

- Support to local administration (communes level): spatial planning and environmental management with the sound use of information delivered from HR satellite images
- Protected areas/N2000 effective environmental management:
  - identification and monitoring of selected habitats,
  - Land cover/land use changes
- Geoeducation for sustainable development
- Development and implementation of geoportal and mobile applications
- Capability building activities: trainings, workshop, seminars, course (online and face-to-face)



## UNEP/GRID-Warsaw Centre contact details

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