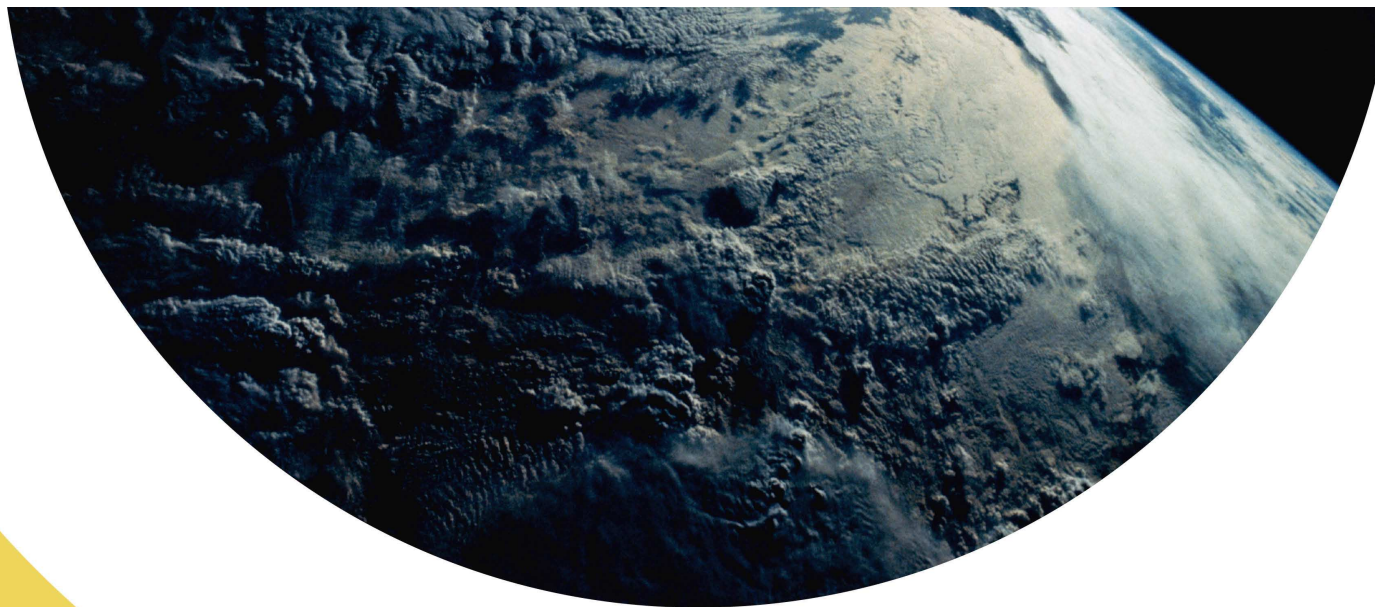




GMES operational capacity workshop

Conclusions from Land sessions

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Objectives / Expectations

- **Geoland 2:**
 - From local to global ⇔ from very high resolution to medium resolution
⇔ from low frequency acquisitions to almost continuous monitoring
 - Euroland : wall-to-wall production in terms of throughput, assured quality and cost efficiency ?
- **Geodynamics:**
 - Future projects in the frame of GMES therefore have to aim at an **integrated approach** of all techniques and **multidisciplinary** projects.
- **SIOSE:**
 - Apply **INSPIRE** principles and specifications to guarantee the final and real harmonization between all different Spatial Data Information of Member States and to avoid duplication of data collection
- **Bulgarian Executive Environment Agency:**
 - Adequately deal with **international reporting obligations**
 - Set up services combining a wealth of data sources, not the least **CLC**
- **Remote Sensing Applications Center (ReSAC):**
 - Broader usage of ReSACs capacities

Objectives / Expectations

- **Land management**

- Need for **models** for **forecasting** of yields and plant growing dynamics
- Proposal to organise as GMES initiative a **common land service observation** and a **EU network of test areas**

- **Constellation of imaging DMC**

- To provide useful information to policy makers and the beneficiaries of the space programme
- By 2015 image **resolution** to come down to **2,5 m**
- On continental scale for **rapid coverage** the data to be accessible through GMES

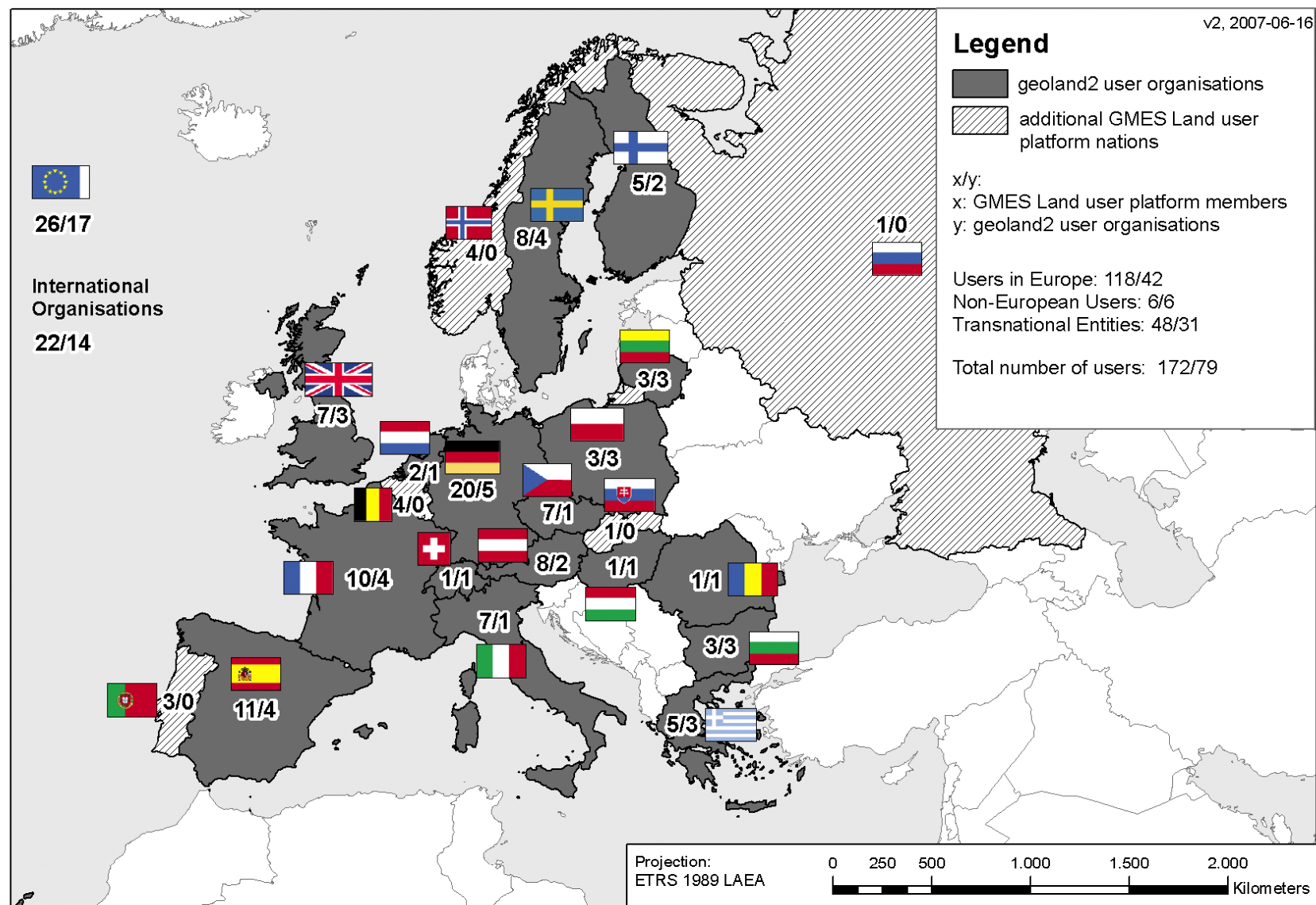
Water information for environment and security

- **Hydrological cooperation** in Europe in view of more harmonised and **more accepted systems** to match local, pan-European and trans-boundary issues

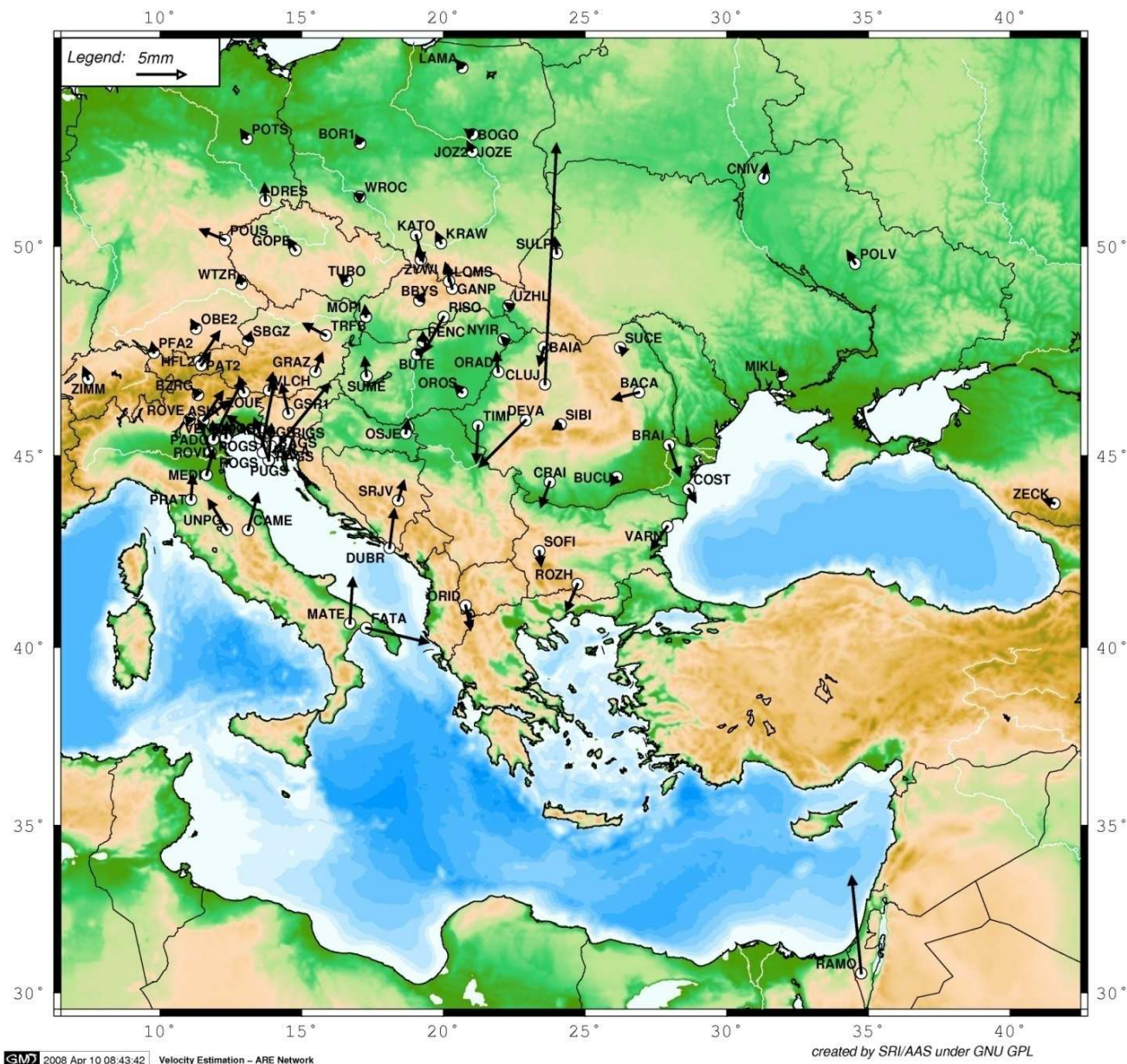
Evolution of LC and LU mapping

- LC/LU mapping needs **different resolutions**, temporal and spatial

Involvement of (new) MS



Involvement of (new) MS



Data Collection and access



Service Elements (user expectations)	geoland2 tasks	Operational perspective
Ortho-rectified EO data (e.g. IMAGE2009)	Requirements specifications (DAP), „shopping list nego“ with ESA based on user feedback	Public good, ready to use data (GCM, Sentinels)
LU/LC ground survey (e.g. LUCAS2009)	Test support by EO-based area frame sampling (spatial context, understand changes)	Integrated ground/EO-based sampling schemes for Europea & Africa
Reference mapping access (e.g. access to topo maps acc. to INSPIRE)	In-situ data requirements specification (inter alia access to topo maps, DEMs)	INSPIRE and SEIS enabling access to MS reference data
LC/LCC mapping Bio-physical parametres (global/continental/local)	Implementation of production lines Demonstration of integrated land monitoring system	Operations of integrated land monitoring system and associated core information services
QA/QC (validation, verification, qualification)	Strict scientific validation User-side QA and acceptance tests (e.g. using LUCAS) Qualification criteria for production lines and providers	Service standards established
Product Dissemination	Webmap-Server data access	European SDI (SEIS)
Data Archiving	Project based (GI)	EEA Land Data Centre

- **Bulgarian executive environmental agency:**
 - *"Imagine all public stakeholders could share their information..."*

Flexible approach centralised de-centralised



- **SIOSE: suggestion for a European Road Map:**
 - **Step 1:** Obtaining by consensus from EC and Member States, common requirements, standards and procedures
 - **Step 2:** Define and obtaining by consensus the necessary images
 - **Step 3:** Encourage and to assist the production at least in those Members States that they are producing with these principles

Capacity building:

- ReSAC (including in FP7)
 - **Geoland2**: pre-operational land service of GMES:
 - CMS: Seasonal/Annual Terrestrial Change Monitoring (SATChMo)
 - CIS: AgriEnvironment and Spatial Planning
 - **SAFER**: pre-operational emergency service of GMES
 - Flood Risk Management
 - Assets Mapping

Awareness raising

- Next Geoland2 User Forum: 2011: Warsaw

Conclusions

Geoland2:

- Lot of discussion was needed with EC/EEA, but intensive interaction now leads to **better understanding of EC/EEA expectations** for Land services

Geodynamics:

- Decisions and results from the cooperation in the frame of EC related to the regional cooperation within the CEE and Balkan Peninsula as whole and particular countries of it is a **good example of a fruitful cooperation** with significant importance and it should further be developed and used.
 - e.g. EUPOS European positioning determination system (< 1m resolution) as an ancillary service for GMES

SIOSE:

- GMES is a great opportunity to demonstrate the potential that Member States have developed in EO, applying a **decentralised approach** in the EU, and applying INSPIRE principles.

Bulgarian Executive Environment Agency:

- Maximum sharing of resources and cooperation needed in order to cope with changing environment in its broadest sense.

ReSAC:

- GMES is European Initiative, but local and regional decisions need local and regional expertise;
- Sustainability and better use of GMES services could be assured by building and developing local and regional capacity in EO.

Conclusions

Land management

- Using satellite images or air born data makes it easier to monitor the crops

Constellation of imaging DMC

- Although GMES is pre operational we need to consolidate what is already available and provide operational support

Water information for environment and security

- Cooperation is when we work together, this is the win-win situation. Cooperation only with 2-3 large countries does not provide the right development.

Evolution of LC and LU mapping

- LC/LU mapping needs different resolutions, temporal and spatial
- LCCS as one of the possible approaches, used by some MS in view of extension to a broader LC/LU inventory