



GMES Pilot Service Land Monitoring

Conclusions Workshop 20-21 Oct 2005

Main conclusions

- Well represented user community confirmed their **present and future requirements** for land information at European, national / regional and local level
- Users are ready to commit, but with **boundary conditions** related to proposed GMES service
- **Technical specifications** and **cost-efficiency** of products and services need further clarifications
- Identified key elements for **long term sustainability** of GMES service are:

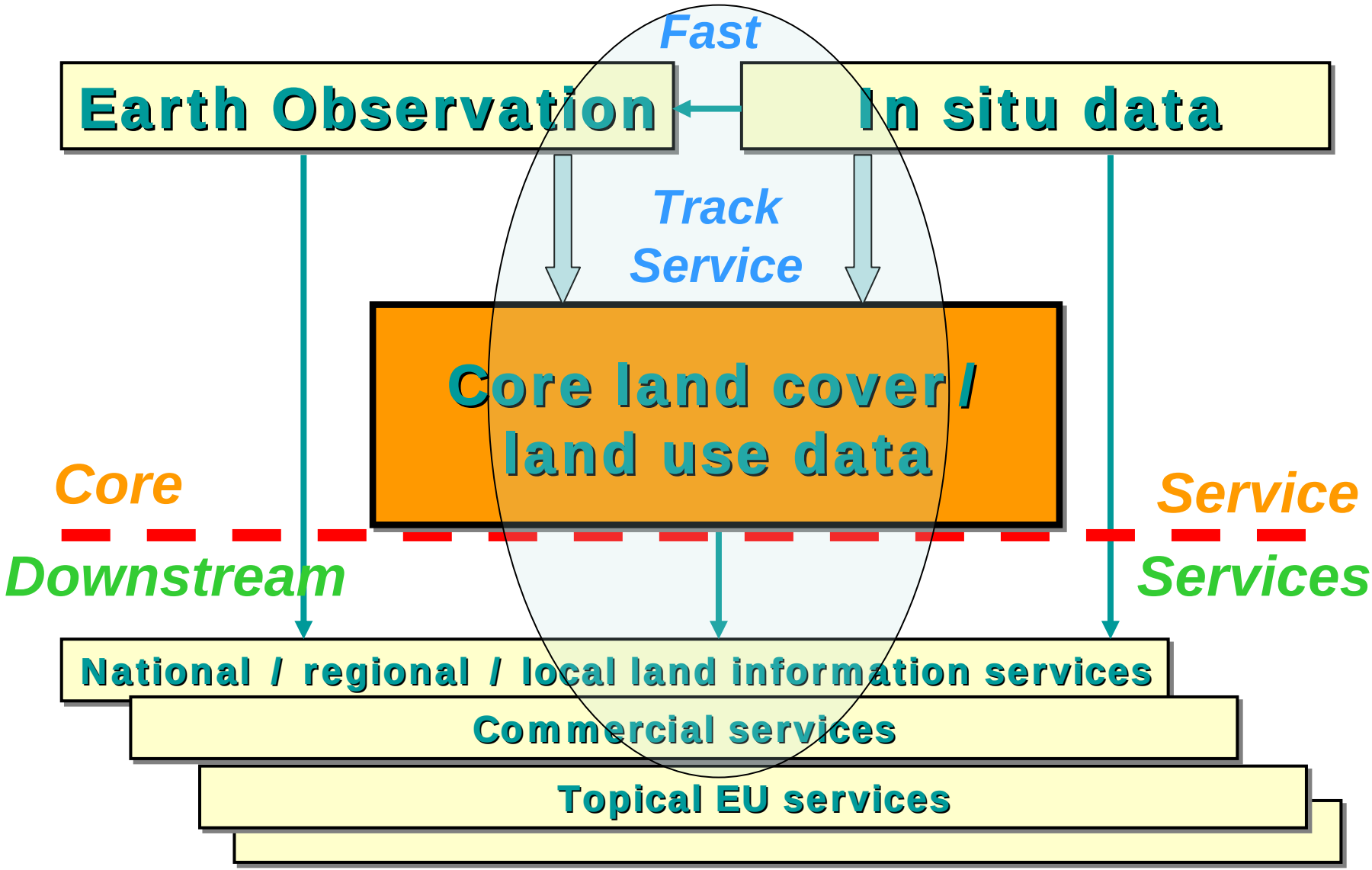
1. Data availability of both space and in-situ component
2. Integration with existing or planned land monitoring initiatives

WS Objective 1: Scope of service and consolidated requirements

Agreed overall objective:

” To provide regularly updated core land cover / land use data for information requirements at European, national / regional and local level ”

Proposed GMES service on Land Monitoring



Serving multiple information requirements like:

- Managing and securing land resources (soil, food & water, environment, energy, properties, infrastructure…)
- Characterization of river catchment areas
- Prevention of groundwater pollution from diffuse and local soil contamination
- Designated areas and habitats, change in ecosystems, fragmentation
- Landscape diversity and management, agriculture and forest habitats, rural area development
- Natural, public & private assets, land use conflicts, territorial planning
- Land use and land cover inventories & change detection, cross-border coordination of urban area planning
- Urban sprawl, rural-urban relationships, Urban Audit
- Soil degradation, protection and sealing
- Road mapping, car navigation, location based services

Main boundary conditions of GMES service Land Monitoring

- ✓ Long-term availability of multitemporal, geometrically and radiometrically corrected satellite data
- ✓ Core land cover data available max. 1 year after satellite data acquisition
- ✓ Updates at least every 3-5 years (continental coverage, more frequently for urban areas)
- ✓ Geographical coverage EU25+
- ✓ Coordinate European with national/regional/urban monitoring activities, in line with principle of subsidiarity
- ✓ Compatible with Corine Land Cover (for continental monitoring), MOLAND (for urban monitoring) as well as FAO (for global monitoring)
- ✓ Data model definition (nomenclature) synchronised with INSPIRE
- ✓ Open access to data

Yielding a core service of:

- Ortho-rectified satellite images and mosaics for continental (high resolution) and local (very high resolution) scales
- In–situ data necessary for satellite data processing, calibration and validation of information
- 3-5 yearly updates of core land cover / land use data with minimum mapping units of 1-5 ha
- Land cover / land use data of 500 functional urban areas ≥100,000 inh., minimum mapping unit 0.1 ha
- Annual low resolution updates and elevation dimension t.b.d. until 2008
- Data dissemination service

WS Objective 2: Next steps 2006-2008 (”Fast Track Service”)

Main building blocks of the GMES pilot service Land Monitoring:

- FP6 Integrated Project **GEOLAND** (2004-2006)
- ESA funded GMES project **GSE Land** (2005-2008)

Coordination required with:

- Other land-related GMES projects (e.g. RISE)
- EEA/Eionet **CORINE** Land Cover (2004-2008)
- **LUCAS** survey (2006-2007)
- **National land cover / land use inventory** programmes (2005-2008)
- Urban Audit
- COGI (for consultation on data procurement and internal EC use)

WS Objective 3: Long term sustainability and added value of GMES

- Moving from ”what is available” to ”what is needed”
- Upfront assessment of what is required
- Key element = data availability of both space and situ-component (cost estimate 30-40 Mio€ p.a.)
- Coordination between European and National/Regional/Local land monitoring programmes and INSPIRE

Added value of GMES

- Guaranteed continuity of service
- Centralised data procurement and meta-information (benefits from EU data sharing: ≥ 30%)
- Harmonized European products for further use at all levels (global/national/local)
- Cost-efficiency (business model still to be developed)
- Integration of information infrastructures
  ⇒ Geospatial one-stop-shop

Issues raised related to long term sustainability

- Governance:
  - Ownership of GMES
  - Role and responsibilities of EC and Countries
  - Management structure and funding mechanisms
  - Open access to GMES data
- Implementation
  - Consistency between ESA-coordinated space component and EU-led service requirements
  - Operational ‘public’ system architecture
- Funding
  - Who pays what after 2008 ?

Next steps

- Set up of steering group for implementation of GMES Land Monitoring service
- Preparation of technical paper with detailed definition of products and services
- Assessment of existing and planned land monitoring in Europe to avoid duplication of work
- Agreement GMES / INSPIRE / MS about data modelling/nomenclature and update/change detection schemes
- Institutional arrangements