



GMES Fast Track Service Land
Geoland-2 Project

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Geoland-2 Executive Board member



geoland₂

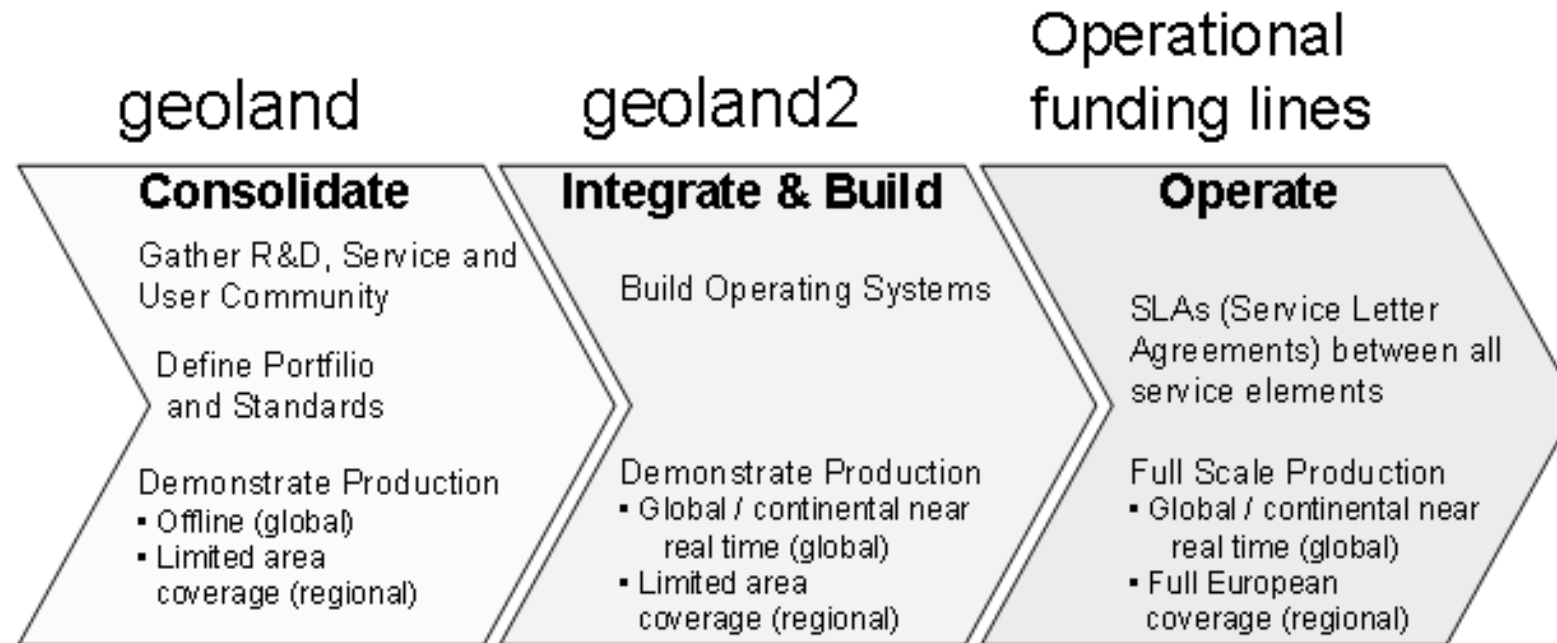


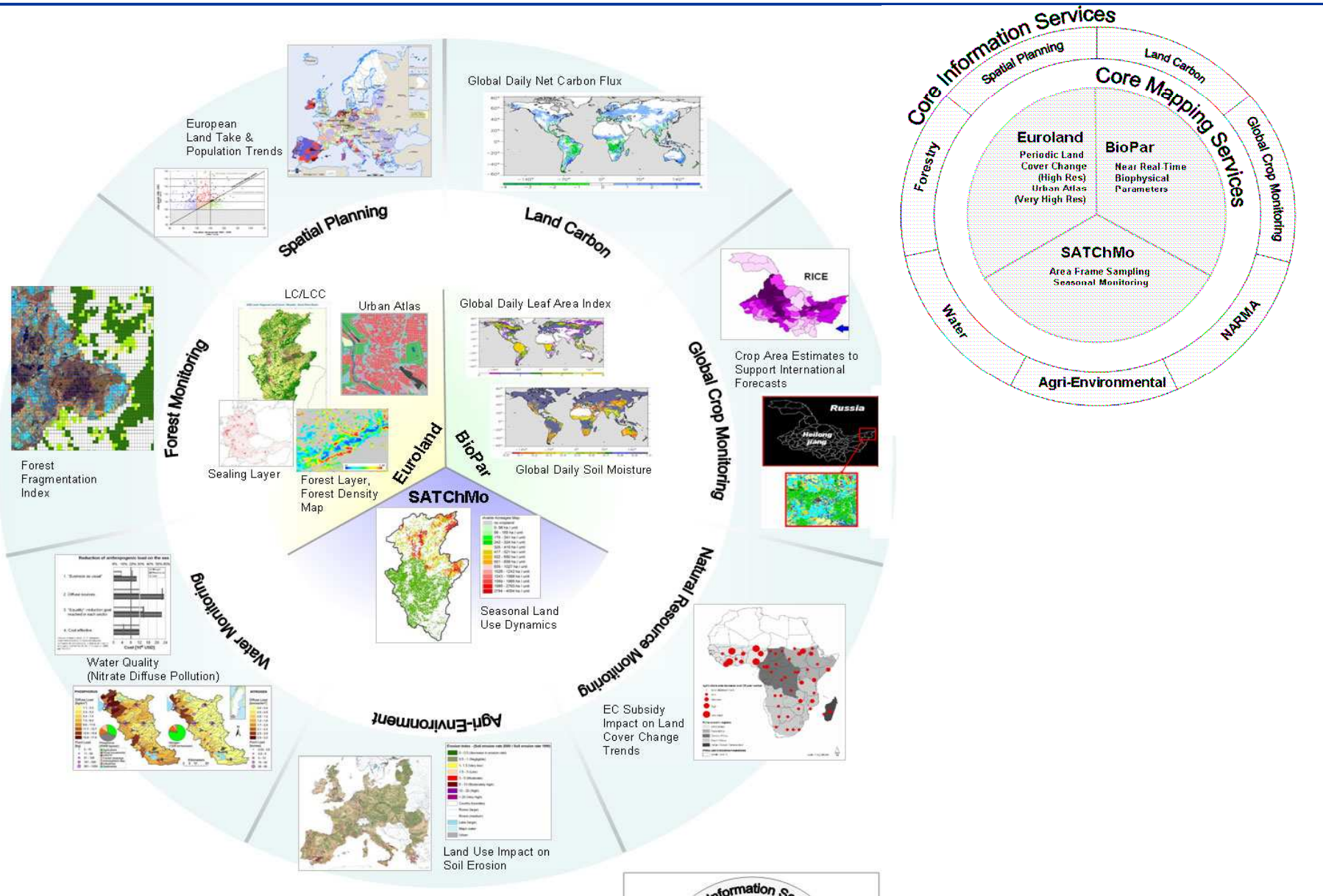
European Commission Fast Track Service Land within the GMES initiative in FP-7





- Fast-track GMES project dedicated to land monitoring
- Awarded in the 1st GMES call of 7th FP (thematic area „Space”)
- Consortium of about 50 European partners led by Infoterra GmbH; Coordinator Alexander Kaptein
- Budget – 22 mln Euro worth grant from EC
- Project started on 1.09.2008
- Duration – 50 months
- Kick-off meeting – November 2008 in Mol (Belgium)
- Continuation of geoland project of 6th FP carried out in 2003-2006
- New requirements from EC after CDR (Jan 2010) => project products updated







- From local to global ⇔ from very high resolution to medium resolution ⇔ from low frequency acquisitions to almost continuous monitoring

	Reso- lution	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Local	VHR	 	 	 	 	 	 
Cont.	HR	 Wall-to-wall  EEA 38 coverage			 update every 3-5 years		
Global	MR/LR	 NRT to Seasonal Monitoring (continuous)					

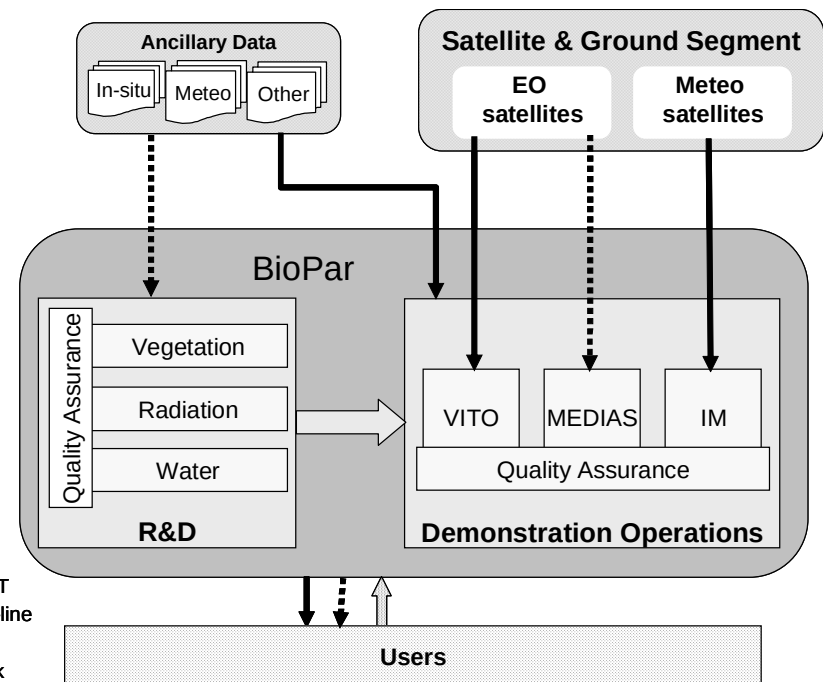
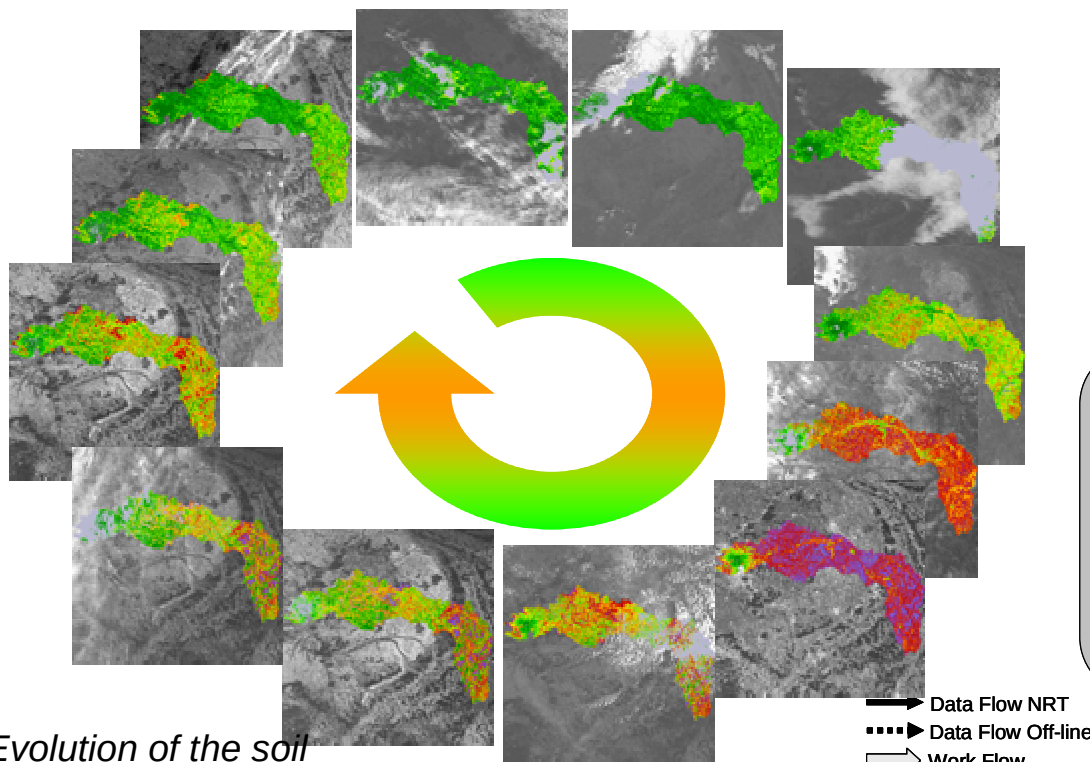


- **Euroland will improve the overall performance of existing prototypes for wall-to-wall LC/LCC production in terms of throughput, assured quality and cost efficiency**

Corine Land Cover 2000 (CLC2000)	Land Monitoring Core Service (LMCS)	Add-on mapping example: crop types - Example GSE SAGE
		
MMU 25 ha	MMU 1...5 ha	MMU 1...5 ha
44 classes	21 classes	21 + 6 agriculture classes
Update every 10 years	Update every 3 – 5 years	Update each year
European (MS) use	European ... MS ... regional use	MS ... regional use

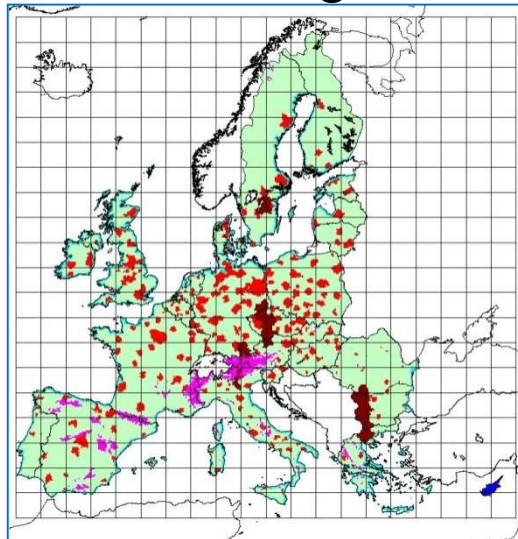


- BioPar aims at setting-up pre-operational infrastructures for providing regional, European and global bio-geophysical products, both in near real time and off-line mode.
- Mostly medium resolution products





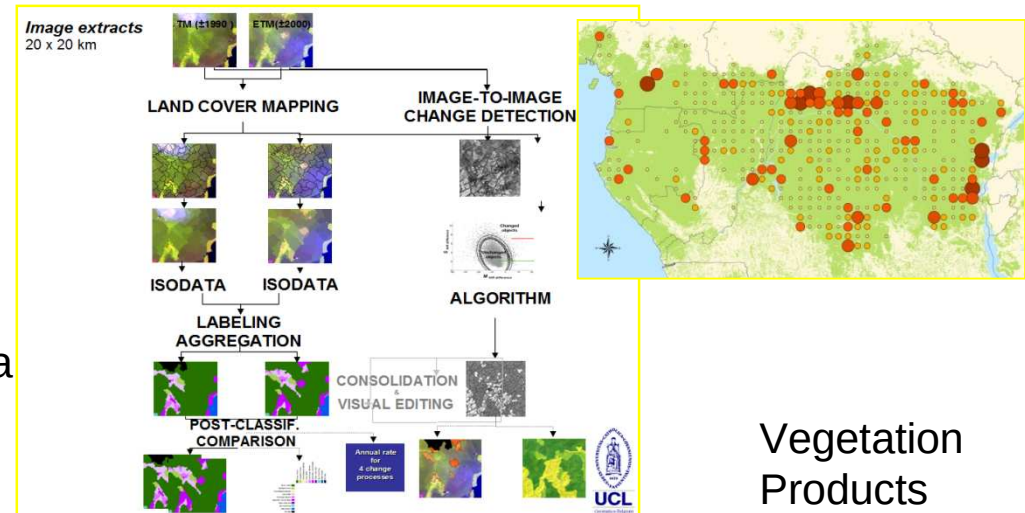
- SATChMo is dedicated to seasonal and annual change monitoring and fills the gap between Euroland and BioPar



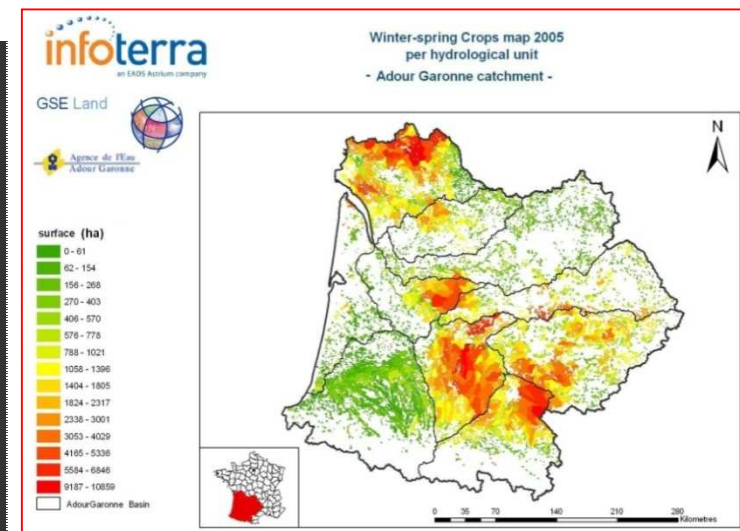
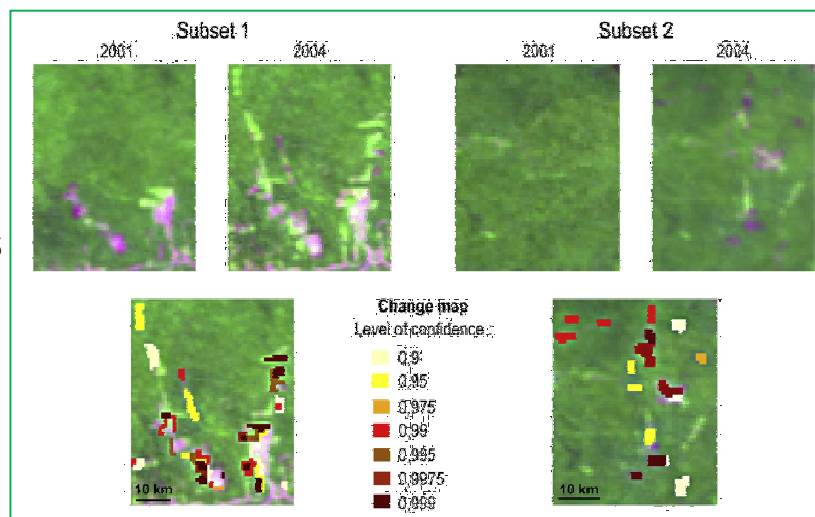
Area
Frame
Sampling:

Europe

Africa



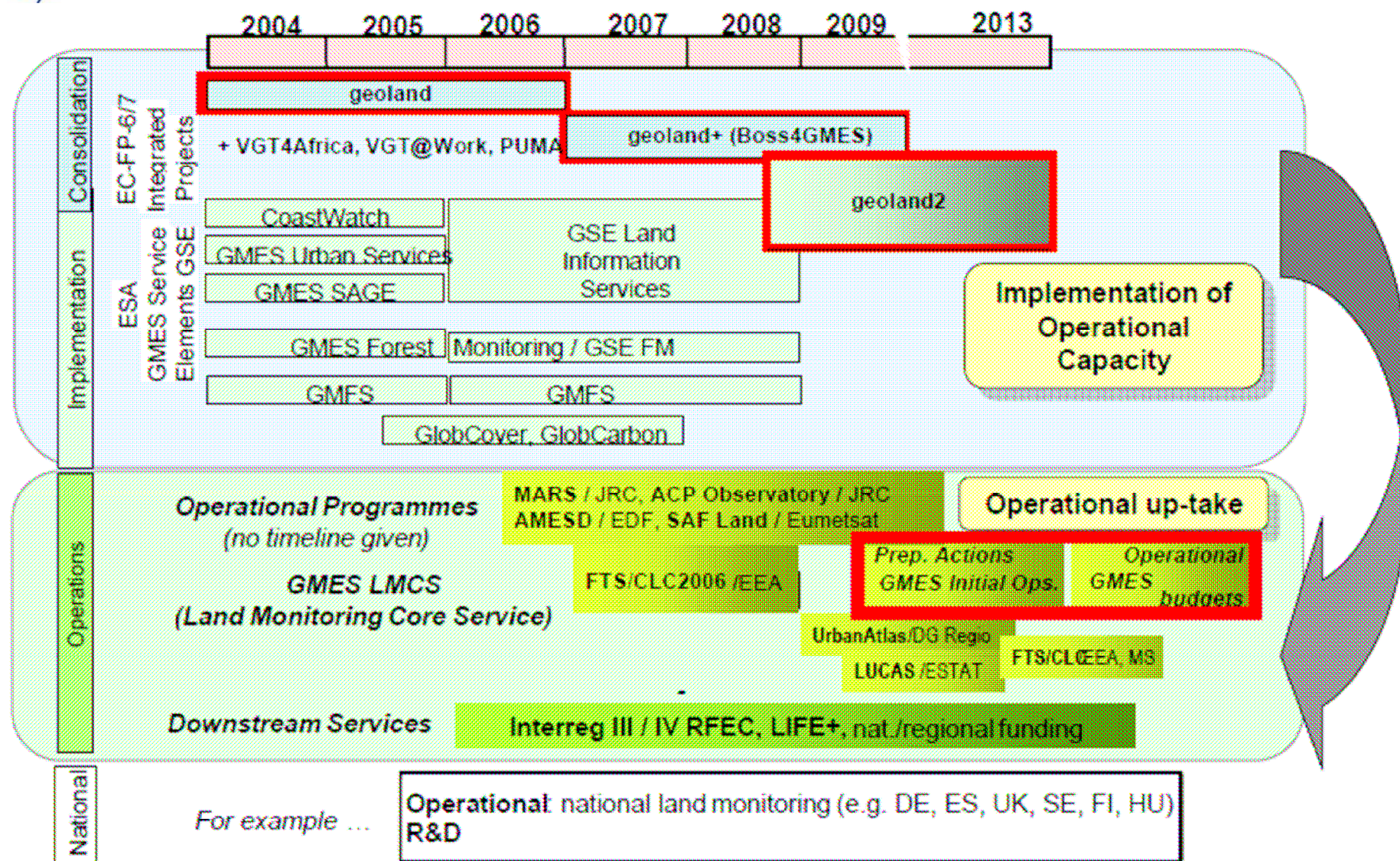
Dynamic
Change
Indicators





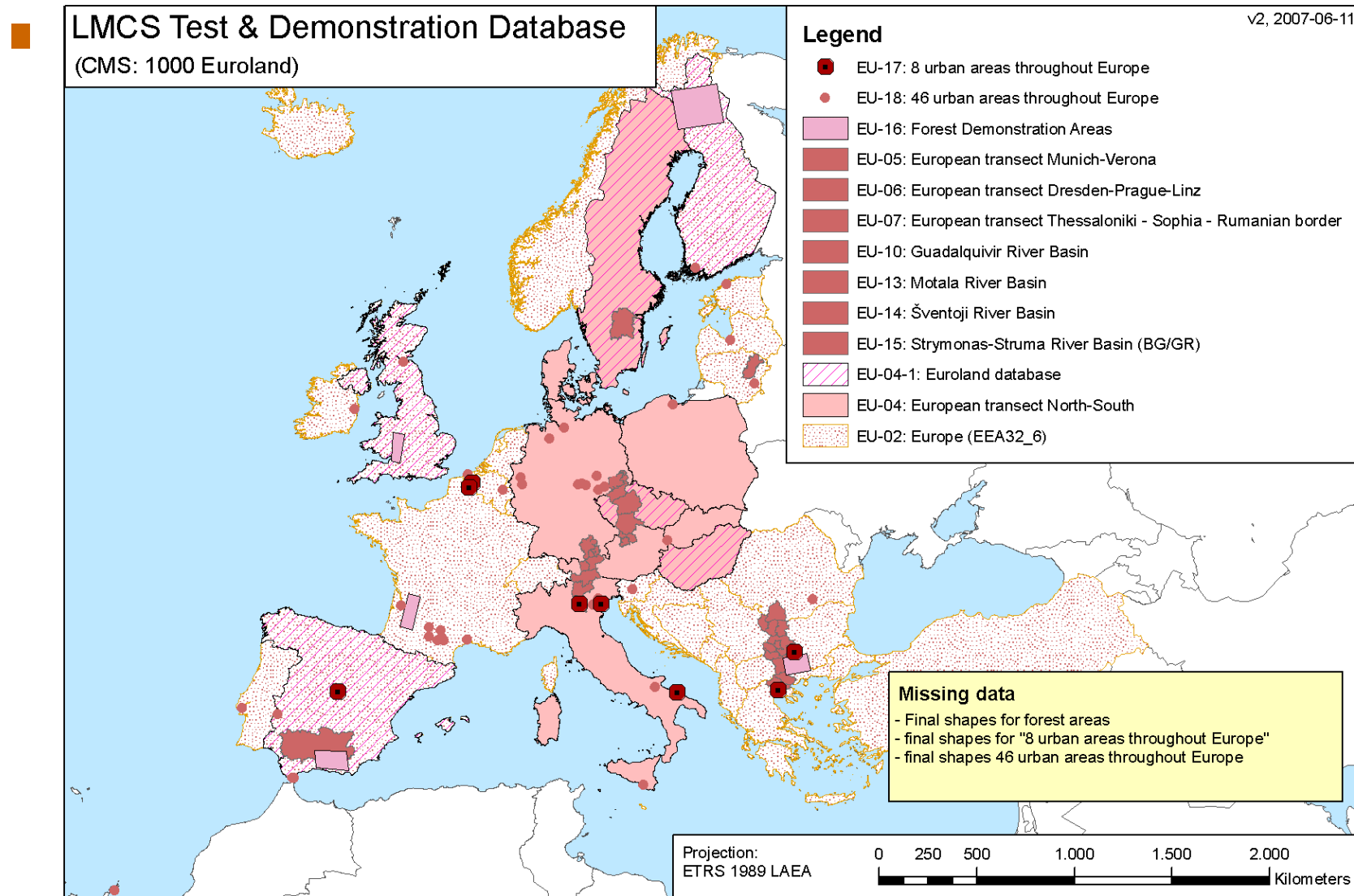
GMES Land related programmes / projects

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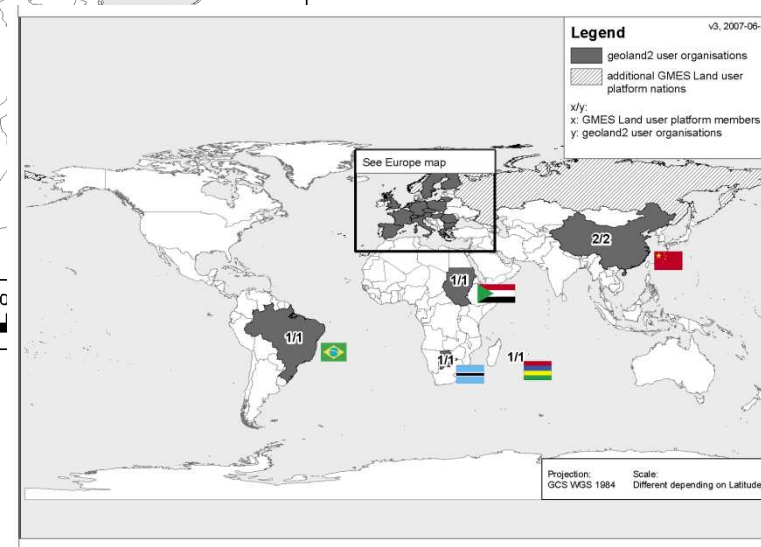
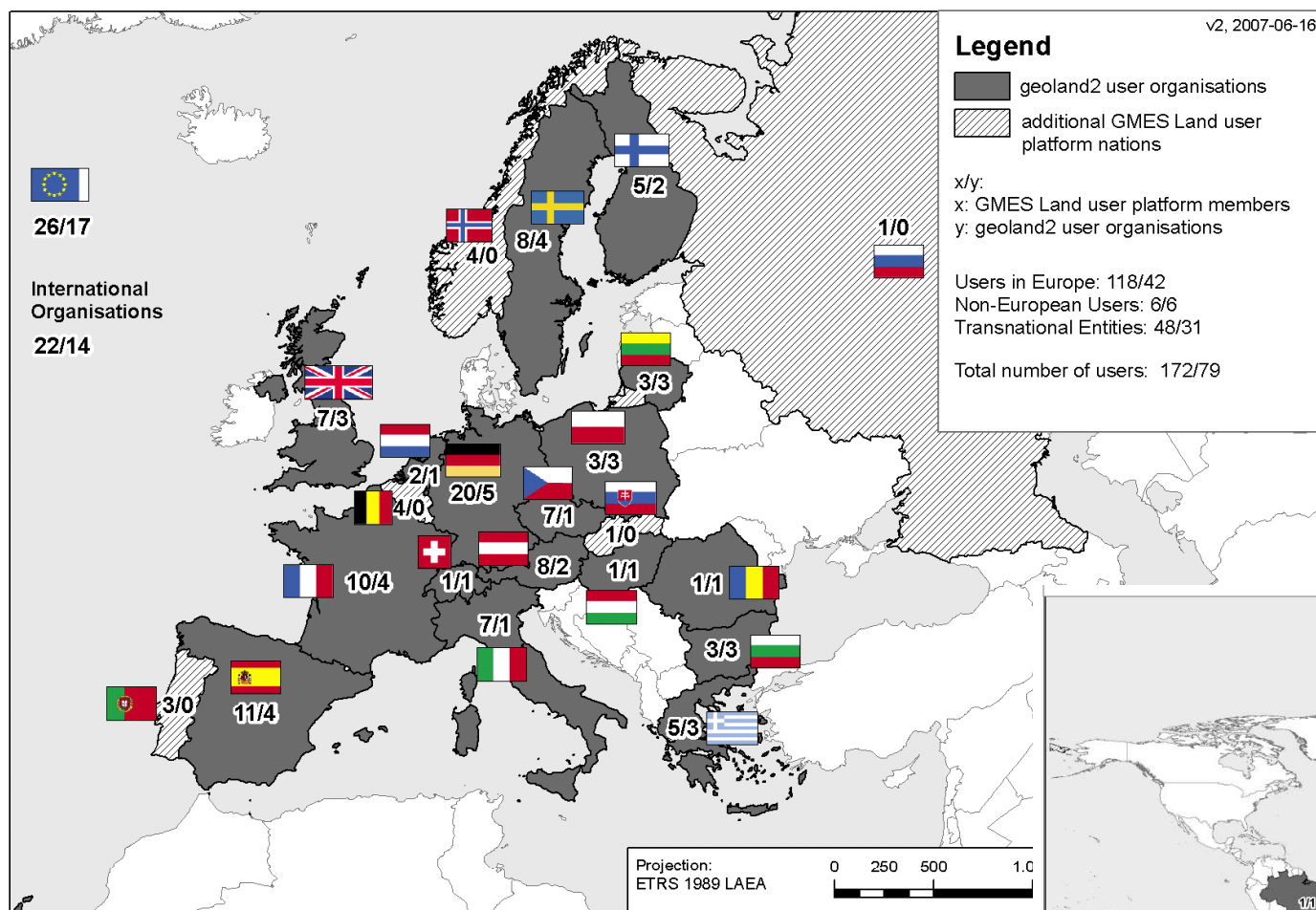


Demonstration sites





User organizations





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



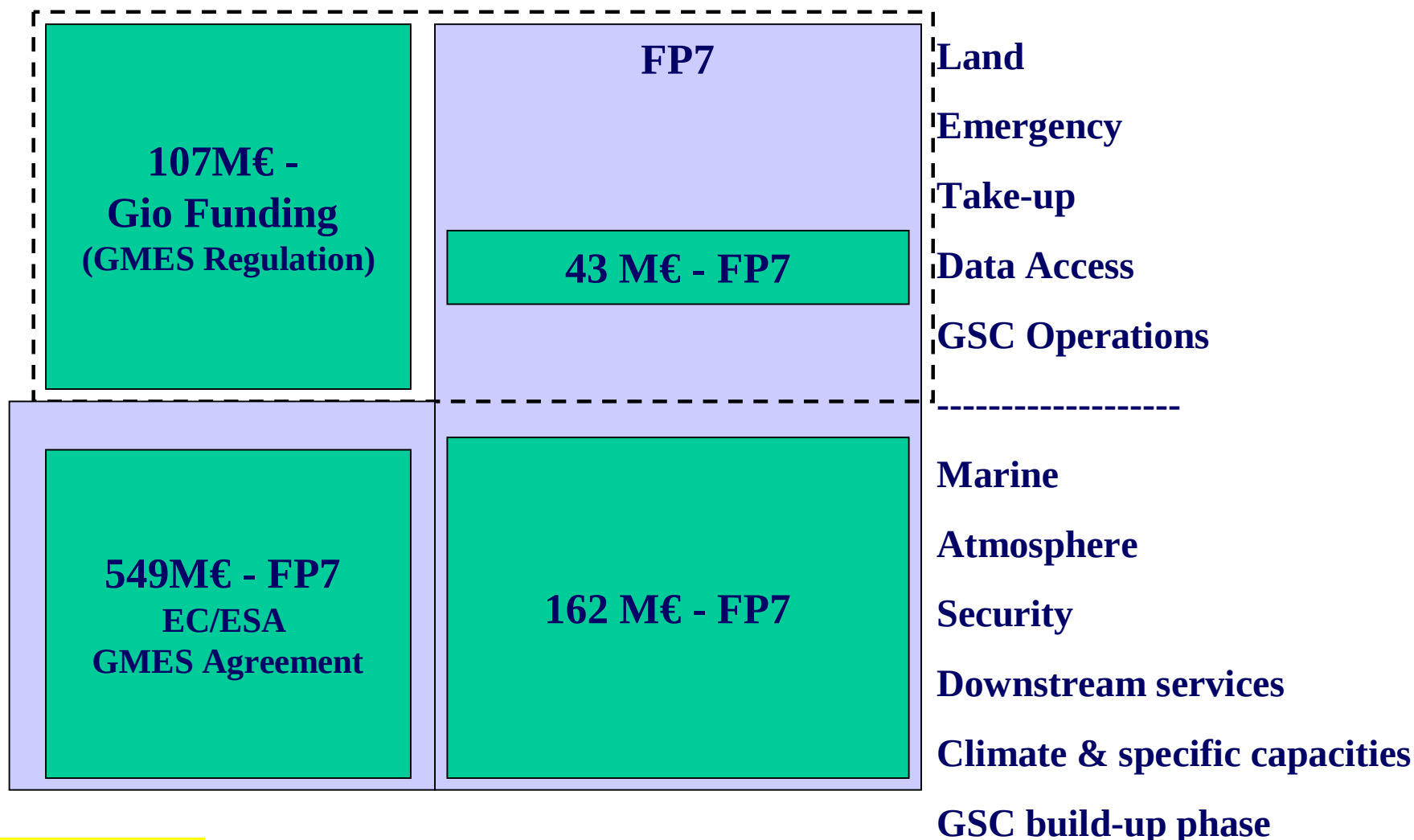
- **Pre-review Meeting (Dec 2009) and Critical Review Meeting (Jan 2010) have shown the gap between the user (EC, EEA) exectations and the foreseen geoland2 services**
- **Intensive dialogue has been initiated to close the gap**
- **The new objectives for the Core Services Elements have been formulated between EC and geoland2**
- **Geoland2 Forum inToulouse (24-25.03) is used to come to a common agreement on what geoland2 should concentrate on**
- **In the next two weeks the details should be fixed by the geoland2 team and presented to EC**



Various sources of funding of GMES

geoland 2

2011-2013





Proposed contents of GIO Land service

■ Proposed 5 HR layers

■ Soil Sealing/Built-up areas

- Sealing density (incl. low density class)
- Built-up change detection

■ Forest

- Primary product: Crown cover density
- Secondary products:
 - *Forest type (deciduous, coniferous, mixed)*
 - *Forest/non forest areas*
 - *Forest area change detection (clearcuts, afforestation..)*

■ Water bodies

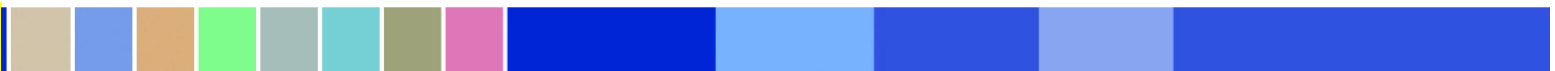
- Small bodies
- Coastal waters
- Water bodies change detection (annual, seasonal)

■ Grassland

- Agriculture areas (arable land, non arable land) and grassland areas (using seasonal data and/or other sources e.g. IACS)
- Grassland change detection (annual, seasonal)
- Grassland types (Permanent/ non permanent/abandoned)

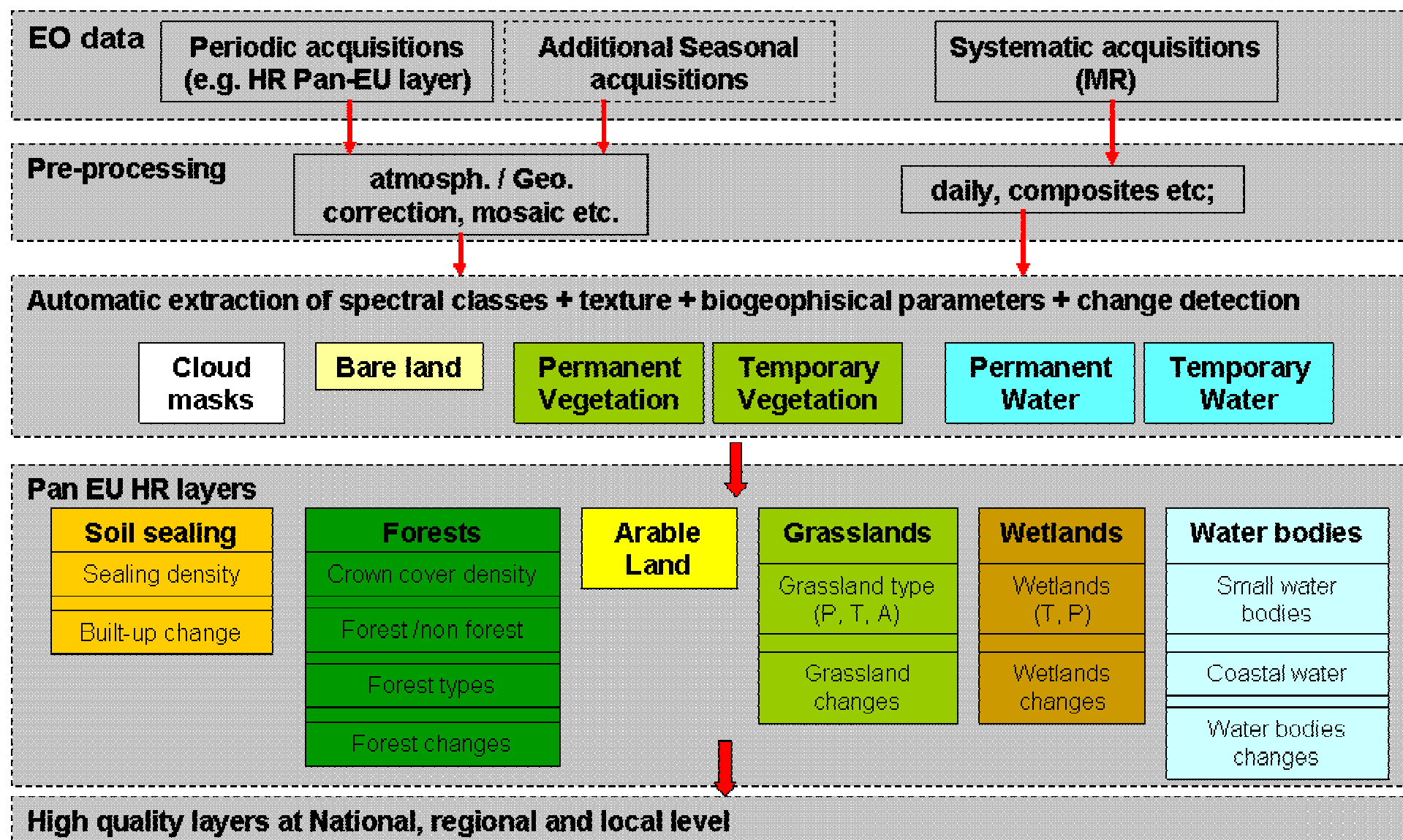
■ Wetlands

- Wetlands areas (using other sources 'in situ' information)
- Wetlands change detection (annual, seasonal)





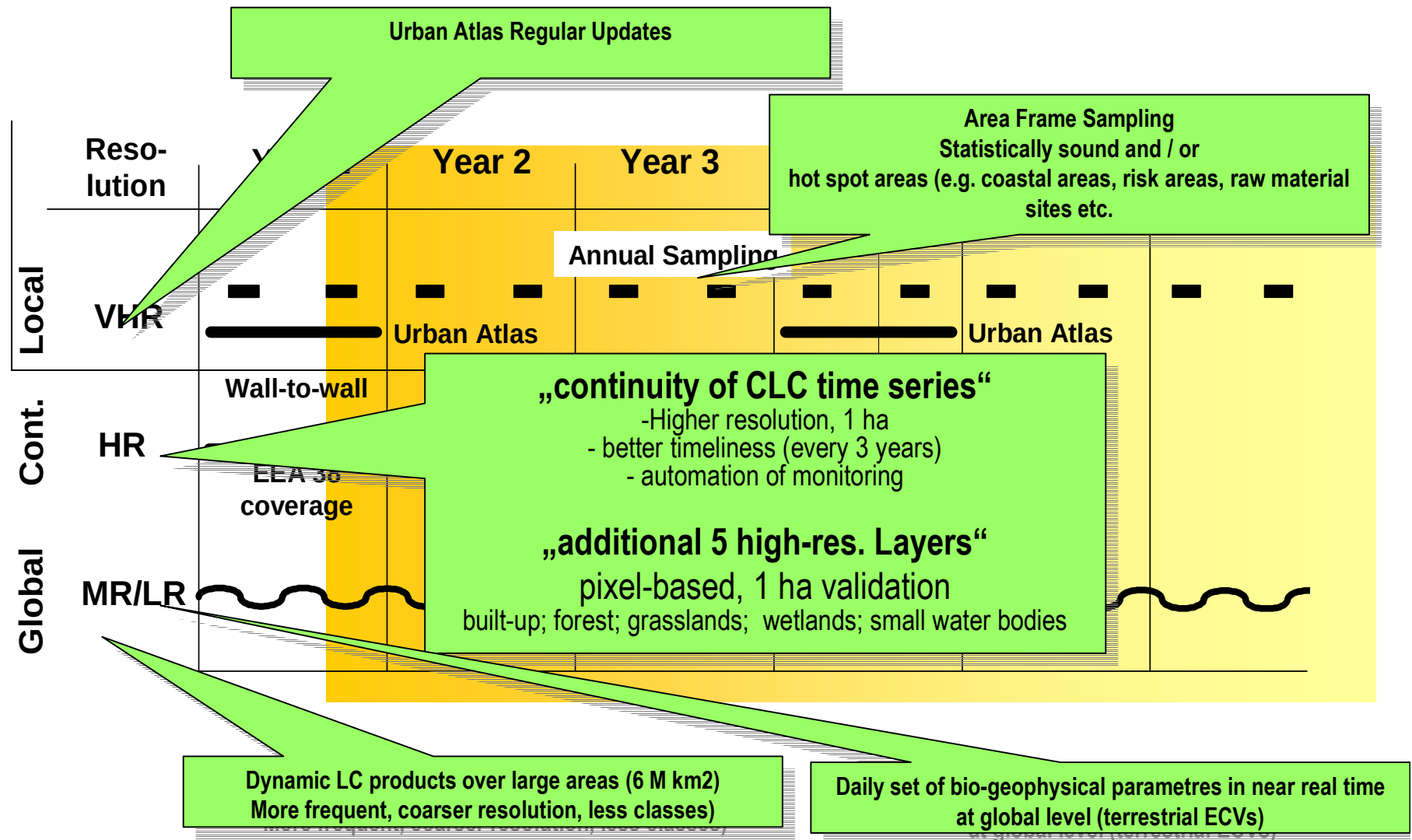
Possible approach for HR layers





Monitoring Concept – Core Mapping Services

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- **geoland forum – new users are very much welcome**
 - Berlin 2009
 - Toulouse 2010 (under way: 24-25.03)
 - Warsaw 2011
- **Downstream services**
 - To be launched succesively starting from the calls in FP7 (this call), then in FP8
 - Partnership with service providers
- **Partner projects, e.g.**
 - MedWet
 - GlobCover
 - CarboEurope



- **Contact geoland2 Coordinator Alexander Kaptein (infoterra GmbH)**
- **More details at; <http://www.gmes-geoland.info/>**

Thank you for your attention !