

# geoland2

## SHOWING THE SITUATION ON THE GROUND

*With climate change an increasing threat, pressure on nature is growing, reducing biodiversity and deteriorating our own living conditions. To mitigate these threats by effective countermeasures and adaptation strategies, monitoring the condition of our natural environment and its changes over time is essential. The project geoland2 constitutes a major step forward towards the implementation of the **GMES/Kopernikus Land Services**, operationally providing reliable and affordable geo-information products on the basis of satellite Earth observation data.*

To respond effectively to the effects of climate change, decision makers need to be informed about the current conditions of our natural environment and predictable trends. The GMES/Kopernikus Land Services provide such area-extended, geo-located and cross-boarder harmonized geo-information at global, European, and regional scales. The project geoland2 aims to prepare the operational application capabilities of these GMES/Kopernikus Land Services, consisting of Core Mapping Services (CMS) and Core Information Services (CIS), to **support decision makers with the most accurate and up to date information available.**

The Core Mapping Services produce basic **geo-information on land cover and land use** and its annual and seasonal changes as well as a variety of additional biophysical parameters describing the continental vegetation state, the radiation budget at the surface and the water cycle on the basis of satellite Earth observation data. They cover local to global scales with updating frequencies from one day to several years.



geoland2 aims to implement the operational production capabilities of the GMES/Kopernikus Land Monitoring Services. These services support the sustainable use of our land resources threatened by man-made pressure and climate variability.

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The CMS mapping products are of broad generic use: besides being a valuable information source in its basic form, they are the basis for more elaborated geo-information services. These focused Core Information Services (CIS) address a wide variety of thematic fields of application, like water quality, forest managing, spatial planning, agri-environmental issues, the carbon cycle, and food security.

These Core Information Services offer **specific information for European Environmental Policies and international treaties and strategies on climate change**, food security and the sustainable development of Africa. Thereby they effectively support responsible public authorities and decision makers on the regional to continental level in the implementation of European policies and international conventions.

The goal of geoland2 is to prepare, validate and demonstrate pre-operational production capabilities of the GMES/Kopernikus Land Services. geoland2 deliverables consist of the organisation of a qualified production network, the building of operational processing lines, demonstration of these services and products on large scales, and the setting up of a product quality assurance process driven by the users, to guarantee that the products meet the real user's needs.

The project's efforts will build up on the achievements of previous or ongoing projects funded under the Sixth Framework Programme, such as geoland and BOSS4GMES, as well as the GMES Service Elements (GSE) funded by the European Space Agency (ESA) in the field of "Land" and "Forest Monitoring".



**ALEXANDER KAPTEIN**  
IS PROJECT COORDINATOR

## QUESTIONS & ANSWERS

### What do you want to achieve with this project?

geoland2 is the GMES/Kopernikus "Land Monitoring Core Service" implementation project. The aim is to implement operational production capacities and to demonstrate the service dealing with monitoring of land cover / land use and their temporal changes as well as bio-geophysical parameters.

### Why is this GMES/Kopernikus service important for Europe?

The service supports public authorities on local to international level in the efficient implementation of European directives and policies towards adaptation to climate change as well as in their efforts towards sustainable development and food security for Africa.

### How does your work benefit European citizens?

The service supports the sustainable use of land resources threatened by man-made pressure and climate variability (e.g. water quality) and efforts towards global food security. Thereby it helps to improve the quality of life of European citizens and people all over the globe.



## LIST OF PARTNERS

- Astrium GmbH, Germany
- UAB Aerogeodezijos institutas, Lithuania
- ALTERRA B.V., The Netherlands
- Austrian Research Centers GmbH (ARC), Austria
- Aristotelio Panepistimio Thessalonikis, Greece
- Commissariat à l'Énergie Atomique (CEA), France
- Consiglio Nazionale delle Ricerche (CNR), Italy
- European Association of Remote Sensing Laboratories (EARSeL), Germany
- European Centre for Medium-Range Weather Forecasts (ECMWF), United Kingdom
- European Forest Institute, Finland
- EOLAB-Spain, S.L., Spain
- Universitat Autònoma de Barcelona (ETC-LUSI), Spain
- Eurosense-Belfotop Nv, Belgium
- GAF AG, Germany
- GEOAPIKONISIS Ltd., Greece
- Geosat Technology SARL, France
- GeoVille Information Systems, Austria
- GISAT s.r.o., Czech Republic
- Instytut Geodezji i Kartografii, Poland
- Instituto de Meteorologia (IM), Portugal
- Indra Espacio S.A., Spain
- Institut national de la recherche agronomique (INRA), France
- Infoterra GmbH, Germany
- Infoterra France SAS, France
- Infoterra Limited, United Kingdom
- JOANNEUM RESEARCH Forschungsgesellschaft mbH, Austria
- Commission of the European Communities - Directorate General Joint Research Centre - JRC ( DG JRC)
- Koninklijk Nederlands Meteorologisch Instituut (KNMI), The Netherlands
- Météo-France (MF-CNRM), France
- The National Land Survey of Sweden, Sweden
- Országos Meteorológiai Szolgálat, Hungary
- Planetek Italia s.r.l., Italy
- Remote Sensing Application Center (ReSAC), Bulgaria
- Sveriges meteorologiska och hydrologiska institut (SMHI), Sweden
- SPACEBEL S.A., Belgium
- Centrum Badań Kosmicznych PAN, Poland
- Romanian Space Agency (ROSA), Romania
- Geodaten Integration und Analyse (GIA), Germany
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- Università degli studi della Tuscia, Italy
- Suomen ympäristökeskuksen (SYKE), Finland
- Landbouw Economisch Instituut B.V., The Netherlands
- Land Network e.V., Germany
- HYGEO S SARL, France
- Centre National d'Etudes Spatiales (CNES), France

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## PROJECT INFORMATION

geoland2

Integrated Project

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Duration: 50 months

EU Contribution: € 22.399.424

Estimated total cost: € 32.505.552

[www.land.eu](http://www.land.eu) (GMES/Kopernikus Land Services, geoportal)

[www.geoland.info](http://www.geoland.info) (product information)

