

DeCOVER

DeCOVER – Geo-Information Services to Update and Supplement Land Cover Data for German Decision Makers

In the light of recent European directives and initiatives, there is a growing need for consistent and up to date land cover data at various scales by regional, national and European authorities. DeCOVER addresses this need by developing and testing a geoinformation service concept providing the required information.

European Context

The DeCOVER services will be developed in close exchange with current European specifications - especially within the framework of the **Global Monitoring for Environment and Security (GMES)** initiative.

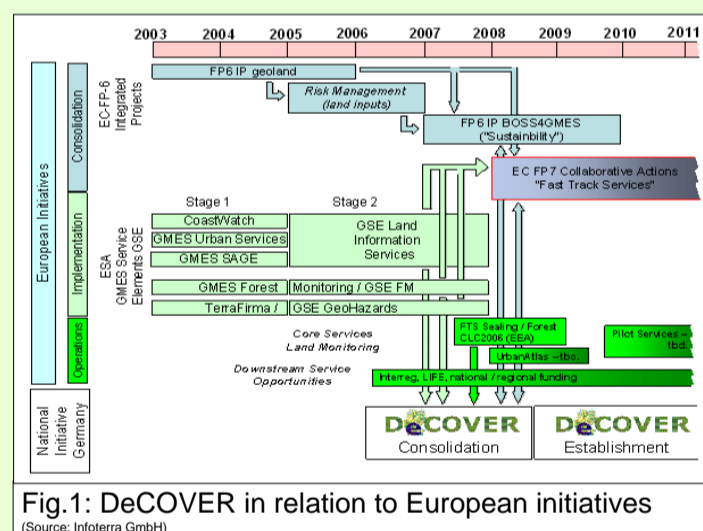


Fig.1: DeCOVER in relation to European initiatives (Source: Infoterra GmbH)

DeCOVER acts as a **SDIC** (Spatial Data Interest Community) within the **INSPIRE** process to take into account and support these recent infrastructure developments in its Transition Phase through

- Provision of reference material
- Consultation and review process
- Consideration of Implementing Rules (IR) in development process
- Opportunities to test draft IR (if applicable)

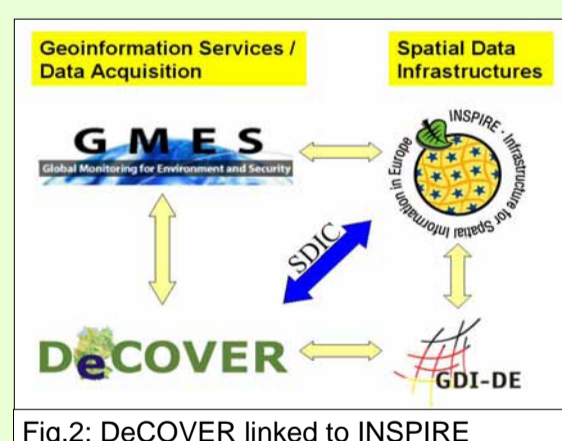


Fig.2: DeCOVER linked to INSPIRE

The Consortium

The DeCOVER consortium consists of eleven partners from all over Germany contributing their expert knowledge.

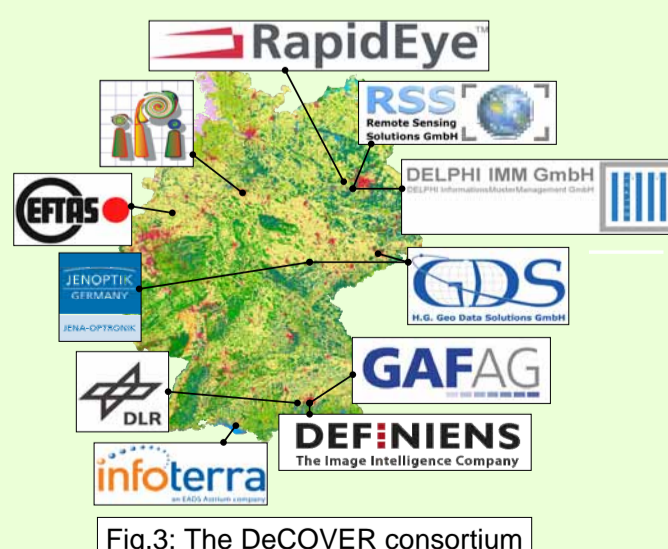


Fig.3: The DeCOVER consortium

Land Cover Harmonization

A DeCOVER Core Object catalogue has been designed based upon

- a comprehensive user-requirements analysis,
- interoperability- potential and
- cost-benefit-restraints.

It consist currently of 39 land cover/use classes with high interoperability potential to CORINE Land COVER (CLC), the planned GMES Land Monitoring Core Service (LMCS), the German topographic reference dataset ATKIS® and the BNTK specifications (Survey of Biotope and Land Use Types) .

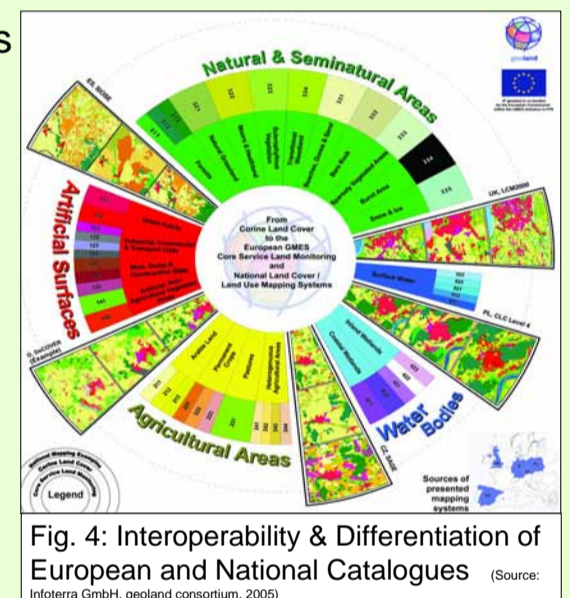


Fig. 4: Interoperability & Differentiation of European and National Catalogues (Source: Infoterra GmbH, geoland consortium, 2005)

Semantic interoperability

One central aspect of the project is the interoperability regarding semantic as well as geometrical and topological relations between different land cover/use nomenclatures. In this project the interoperability of a DeCOVER Service is described to create synergies for data updates and to simplify data exchange to existing catalogues (CLC, GMES, ATKIS®, BNTK).

The DeCOVER approach involves the development of a unified expandable basis vocabulary to describe the existing land cover/use objects. Each object is described in terms basis vocabulary, known as application ontology.

Conclusions can then be drawn regarding the similarity of object classes. A **similarity measure** extends the ontology approach, to support especially the transfer from one object class to another between different catalogues.

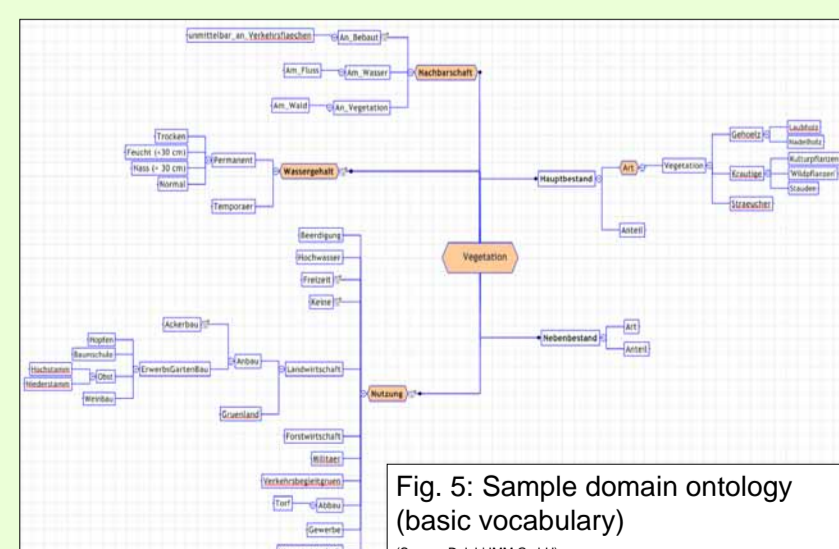


Fig. 5: Sample domain ontology (basic vocabulary) (Source: Delphi IMM GmbH)

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