

## THE eContentplus-PROJECT „GS SOIL”

### ASSESSMENT AND STRATEGIC DEVELOPMENT OF INSPIRE COMPLIANT GEODATA-SERVICES FOR EUROPEAN SOIL DATA

Within the European Member States comprehensive soil data assets exist. Although notable amounts of soil data have already been prepared digitally, data accessibility is still extremely limited. The inter-organisational and cross-border distribution of soil data is tremendously difficult and in many cases datasets are not interoperable, neither on a technical nor on a semantic level. For the huge community of experts and citizens within the European Union soil data therefore are difficult to obtain, to understand and to use. Soil information is essential in particular for land use planning, environmental protection and impact analysis as well as for risk analysis. Within the INSPIRE directive the theme soil is explicitly addressed as an individual theme (Annex III) and besides that soil related environmental, agricultural and forestry aspects are also addressed in Annex II and III of the directive.

A European network to improve the access to spatial soil data for public sector bodies, private companies and citizens will be established. The main result of the project will be a central Soil Portal, where European soil data from heterogeneous sources will be bundled. In order to ensure cross-border usability of the portal and related services, aspects of multilingualism and data interpretation will be considered. In this respect the harmonisation of metadata will also be a key topic within the project.

The project duration is from 06/2009 – 05/2012. The overall budget of the project is ca. 5.1 Euro out of which ca 4.1 Mio € are funds out of the European community programme *eContentplus*.

The project will consider aspects of data organisation, data harmonisation as well as semantic and technical interoperability in order to produce seamless geospatial information and to improve the data access for a wide community of different user groups. The structural specification for the description and harmonisation of spatial soil data within Europe as well as the operation of a corresponding spatial infrastructure are main objectives of GS Soil. InGrid®, the technology of the German Environmental Information Portal PortalU®, will be used as technical base to build up a European GS Soil Portal. It will be used to bundle the decentralized distributed soil information of the 18 participating states.

The consortium consists of 34 partners from 18 European member states:

<p><b>Germany</b></p> <ul style="list-style-type: none"> <li>– Coordination Center PortalU at the Lower Saxony Ministry of Environment and Climate Protection (Coordinator)</li> <li>– Federal Institute for Geosciences and Natural Resources</li> <li>– con terra GmbH</li> <li>– Fraunhofer Institute for Computer Graphics Research</li> <li>– wemove digital solutions GmbH</li> </ul> <p><b>Austria</b></p> <ul style="list-style-type: none"> <li>– Federal Research and Training Center for Forest, Natural hazards and Landscape</li> <li>– Umweltbundesamt GmbH</li> <li>– Austrian Agency for Health and Food Safety</li> <li>– Paris Lodron University of Salzburg</li> </ul> <p><b>Belgium</b></p> <ul style="list-style-type: none"> <li>– Vlaamse Overheid</li> </ul> <p><b>Bulgaria</b></p> <ul style="list-style-type: none"> <li>– Infologica Ltd.</li> <li>– Institute of Soil Science Nikola Poushkarov</li> </ul> <p><b>Czech Republic</b></p> <ul style="list-style-type: none"> <li>– Czech Environmental Information Agency</li> <li>– Masaryk University</li> </ul> <p><b>Denmark</b></p> <ul style="list-style-type: none"> <li>– University of Aarhus</li> </ul> <p><b>Spain</b></p> <ul style="list-style-type: none"> <li>– Spanish National Research Council</li> </ul> <p><b>Finland</b></p> <ul style="list-style-type: none"> <li>– MTT Agrifood Research Finland</li> </ul> <p><b>France</b></p> <ul style="list-style-type: none"> <li>– Alsace Region</li> </ul>	<p><b>Greece</b></p> <ul style="list-style-type: none"> <li>– Aristotle University of Thessaloniki</li> <li>– Institute of Geology and Mineral Exploration</li> <li>– National Agricultural Research Foundation</li> </ul> <p><b>Hungary</b></p> <ul style="list-style-type: none"> <li>– Central Agricultural Office</li> <li>– Research Institute for Soil Science and Agricultural Chemistry of the Hungarian Academy of Sciences</li> <li>– Szent Istvan University</li> <li>– University of Miskolc, Dept. of Physical Geography and Environmental Sciences</li> </ul> <p><b>Ireland</b></p> <ul style="list-style-type: none"> <li>– Irish Agriculture and Food Development Authority</li> </ul> <p><b>Poland</b></p> <ul style="list-style-type: none"> <li>– Warsaw University of Technology</li> </ul> <p><b>Portugal</b></p> <ul style="list-style-type: none"> <li>– EDISOFT s. a.</li> <li>– National Institute for Biological Recourses</li> </ul> <p><b>Romania</b></p> <ul style="list-style-type: none"> <li>– National Research and Development, Institute for Soil Science Agricultural Chemistry and Environment</li> </ul> <p><b>Slovakia</b></p> <ul style="list-style-type: none"> <li>– Soil Science and Conservation Research Institute</li> </ul> <p><b>Slovenia</b></p> <ul style="list-style-type: none"> <li>– Agricultural Institute of Slovenia</li> </ul> <p><b>United Kingdom</b></p> <ul style="list-style-type: none"> <li>– Agri-Food &amp; Biosciences Institute</li> <li>– Macaulay Land Use Research Institute</li> </ul>
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Further, the project will extensively support the implementation of the INSPIRE requirements on basis of available experience in selected European countries and regions. The results of the project will be:

1. A consolidated soil-related theme catalogue and consolidated soil-related theme content-framework standards.
2. A INSPIRE compatible metadata profile for spatial soil datasets, dataset series and services.
3. Generic application schemes for soil information.

4. A web portal (GS Soil Portal) which provides access to all project soil data, including
  - a view service which provides access to spatial soil data,
  - discovery and view of the INSPIRE conform metadata for the provided soil maps,
  - interoperable spatial soil datasets (for exemplary soil products),
  - case studies on cross-boarder delivery of harmonised soil data access.
5. Best practise guidelines for
  - creating and maintaining metadata for soil database,
  - data harmonisation.

Besides the expertise already bundled in the project consortium the partners can rely on the consultations of the advisory board. This includes the Joint Research Centre of the European Commission, the Institute for Environment and Sustainability. Therein the Spatial Data Infrastructure Unit and members of the team “Action Soil” are involved in the project activities. Further, the European Environment Agency and the German Federal Agency for Cartography and Geodesy advise the consortium.

To effectively use synergies between ongoing projects and activities related to the relevant issues, several networking and clustering activities are foreseen.

For further information please visit the project website: [www.gsoil.eu](http://www.gsoil.eu).

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[www.biobio-indicator.wur.nl/UK/](http://www.biobio-indicator.wur.nl/UK/)

## BIOBIO – INDICATORS FOR BIODIVERSITY IN ORGANIC AND LOW-INPUT FARMING SYSTEMS

EU FP7 Project 227161

01.03.2009 – 31.08.2012

### **1. Project summary**

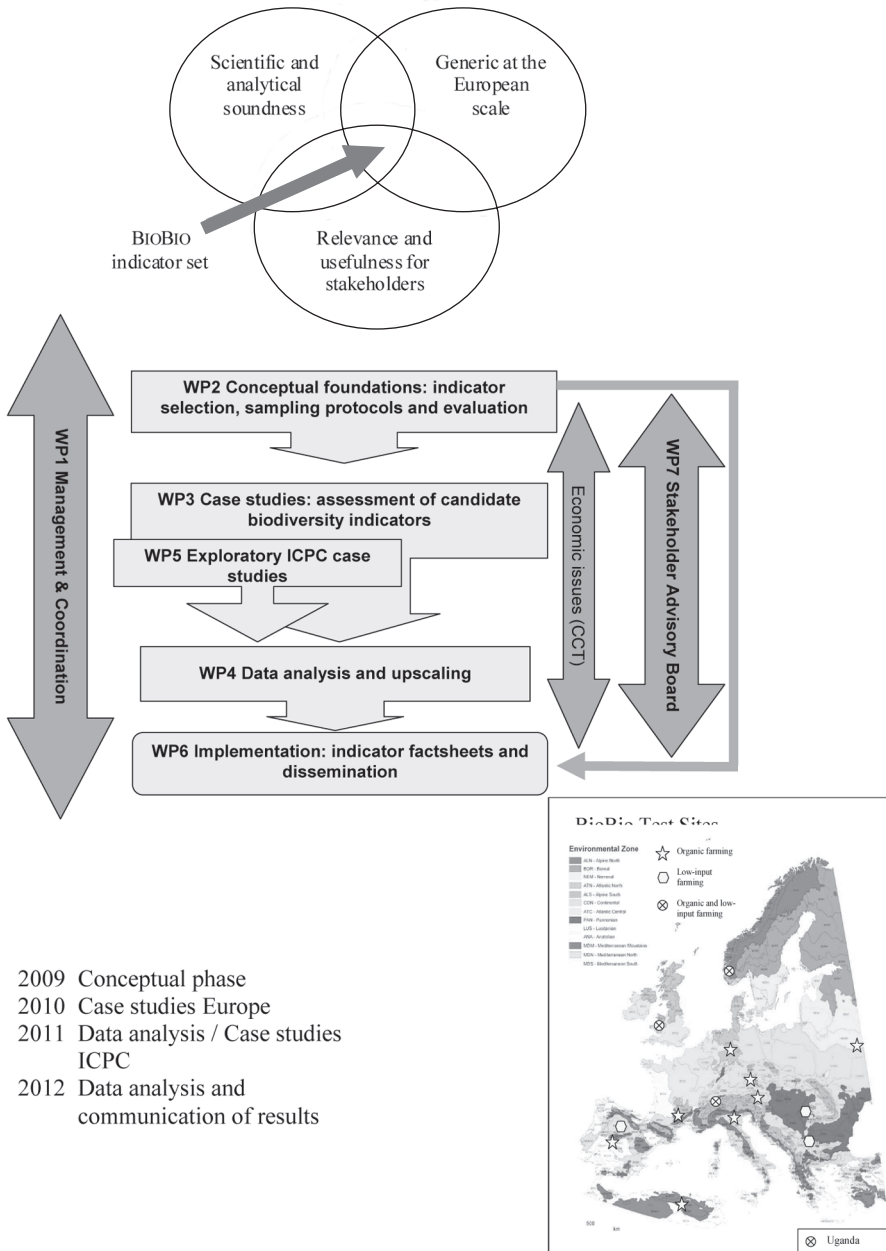
Organic and low-input farming systems have been shown to benefit farmland biodiversity although a generic indicator system to assess these benefits at the European level is lacking. The BIOBIO project will therefore pursue the following objectives: 1. Conceptualization of criteria for a scientifically-based selection of biodiversity indicators for organic/low-input farming systems; 2. Assessment and validation of a set of candidate biodiversity indicators in representative case studies across Europe (and in ICPC countries); 3. Preparation of guidelines for the implementation of biodiversity indicators for organic/low-input farming systems for Europe and beyond. Existing indirect farm management indicators as well as direct indicators for genetic, species and habitat diversity will be assessed for their scientific soundness, practicality, geographic scope and usefulness for stakeholders. Candidate indicators will be tested in a standardised design in twelve case studies across Europe and later in three ICPC countries. Case study regions will include pannonian, alpine, boreal, Atlantic and Mediterranean grassland systems (both organic and/or low-input), rain fed organic farms under temperate and Mediterranean conditions, mixed organic farming, organic special crops and low-input tree/agroforestry systems. Plot, farm and regional scales (where applicable) will be addressed. The investigation will include new agricultural practices, e.g. soil conservation, crop rotation management, seed and crop mixtures and economic issues relating to the costs of indicator measurement and to benefits of biodiversity as perceived by different groups of the population. Stakeholders (farming communities, conservation NGOs, administrators) will be integrated at critical stages of the indicator selection process. A handbook with factsheets will be produced for validated indicators and a sampling design for biodiversity monitoring in organic and low-input farming systems across Europe.

## Partnership

Federal Department of Economic Affairs FDEA Research Station ART (Project coordinator)	FDEA-ART	CH
Szent Istvan Egyetem	SIU	HU
Aberystwyth University	ABER	UK
Norsk Institutt for Skog og Landscap	NFLI	NO
Universitaet fuer Bodenkultur Wien	BOKU	AT
ALTERRA B.V.	ALTERRA	NL
Technische Universitaet Muenchen	TUM	DE
Universidad de Extremadura	UEX	ES
Universita degli Studi di Padova	UP	IT
SOLAGRO	SOLAGRO	FR
Institute of Plant Genetic Resources	IPGR	BG
Alma Mater Studiorum – Universita di Bologna	UNIBO	IT
Institut Nationale de la Recherche Agronomique	INRA	FR
Bila Tserkva National Agrarian University	BTNAU	Ukraine
Institut National de Recherche en Génie Rural, Eaux et Forêts	INRGREF	Tunisia
Faculty of Agriculture, Makerere University	MAKARERE	Uganda



www.BIOBIO-indicators.com



- 2009 Conceptual phase
- 2010 Case studies Europe
- 2011 Data analysis / Case studies ICPC
- 2012 Data analysis and communication of results

