

JOINT RESEARCH CENTRE - FP7 - WP2008

Action n° 22004 - SOIL - Soil Data and Information Systems

(SOIL)

Institute for environment and sustainability

Policy Theme: 2 - Solidarity and the responsible management of resources

Agenda No & Title: 2.2 - Natural resources

Web site address (URL): eusoils.jrc.it

Action Leader: MONTANARELLA LUCA

Customer/users (outside the European Commission):

- Academics
- Authorities in Accession Countries
- Candidate Countries
- Chemicals Industry
- Citizens
- Competent Authorities
- Convention on Bio-Diversity - CBD
- EFSA
- Environmental Agencies of Member states
- Environmental authorities of the Member States and Candidate Countries
- EU Member State competent authorities
- EU Member States
- European Environment Agency
- European Parliament
- FAO
- FAO (Food and Agriculture Organisation of the United Nations)
- INSPIRE Legally Mandated National Organisations (e.g. Ministries of Environment)
- INSPIRE Legally Mandated National Organisations (e.g. Ministries of Environment, Regional Public Authorities, Mapping Agencies, Statistical Institutes, Environmental Protection Agencies, Cadastres, Geological Surveys)
- ISRIC - World Data Centre for Soils
- Member State Competent Authorities
- Member States
- Member States and Candidate Countries
- Member States Research organizations
- Ministries of Agriculture

- Ministries of Environment of Member States
- National laboratories and institutes
- Regional Authorities
- Scientific Community
- UNDP
- UNEP
- United Nations Convention to Combat Desertification - UNCCD
- United Nations Food Agriculture Organization (UN-FAO)
- Universities

Customer DGs (inside the European Commission):

- Agriculture and Rural Development - AGRI
- EuropAid - AIDCO
- Development - DEV
- Environment - ENV
- Eurostat - ESTAT

Keywords:

Soil Data Centre, Soil Thematic Strategy, Soil Framework Directive, Desertification

Rationale:

Soil data and information are relevant for a number of European Union (EU) policy areas: agriculture, soil protection, water protection, nature protection, development policy, health and sustainable development. The EU Thematic Strategy for Soil Protection addresses these different policy areas in a coherent manner and proposes the way forward towards effective soil protection in Europe. Policy relevant soil data and information will therefore play a crucial role in the policy development and implementation process. In addition, a number of global multilateral agreements also ratified by the European Community (United Nations-Framework Convention on Climate Change, UN-Convention on Biological Diversity, UN-Convention to Combat Desertification) demand an increasing amount of soil data and information: climate change, biodiversity and desertification are global issues that are strongly related to soil degradation phenomena at the global scale. This Action will provide, through the establishment of the European Soil Data Centre a single focal point for soil data and information for the Commission. It will therefore support the other Commission's services in the negotiations of the Thematic Strategy for Soil Protection and the proposal for a Soil Framework Directive through the EU Institutions and their subsequent implementation in the Member States. The Action will also facilitate the reporting and assessment obligations by Member States.

Summary of the project:

The specific objective of this action is to establish a thematic centre for soil related data and information in Europe, in support to the needs of DG ENV following the technical arrangement of the Go4 (DG ENV, EUROSTAT, EEA and JRC). The European Soil Data Centre (ESDAC) will become the single focal point for policy relevant soil data and information at EU level by hosting relevant EU soil products (by which is meant datasets, documents, services and other types of information such as maps and graphs) and by providing web-based tools for the access to and the update of information located at the ESDAC.

It will serve the Commission's needs in negotiating through the European Union Institutions the new Thematic Strategy for Soil Protection (COM (2006)231) and the Soil Framework Directive (COM(2006)232) as well as their subsequent implementation in Member States. Advanced modelling techniques and scenario analyses will be used to provide soil information to end users in relation to the major threats to soil identified in the Thematic Strategy for Soil Protection (erosion, decline of organic matter, compaction, salinisation, landslides, sealing, contamination and loss of soil biodiversity). A strong scientific and technical support to the United Nations Convention to Combat Desertification (UN-CCD) will be provided by promoting the reform of the Committee of Science and Technology (CST) of the UN-CCD and by the development of an operational Global Soil Information System (GLOSIS) for the regular assessment of global soil degradation processes.

This Action will provide a coherent approach to soil data collection and distribution for all different policy areas and initiatives relevant to the European Union, while assuring high scientific quality, policy relevance and technical support as needed. The Action will focus on the following overarching objectives:

The establishment of the European Soil Data Centre (ESDAC) as a single focal point for all soil data and information in Europe.

The development of procedures and methods for data collection, quality assessment and control, data management and storage, data distribution to Commission and external users, fully complying with INSPIRE principles for spatial data infrastructures.

Research and development of advanced modelling techniques, indicators and scenario analyses in relation to the major threats to soil (erosion, decline of organic matter, compaction, salinisation, landslides, sealing, contamination, and loss of soil biodiversity), as identified in the Thematic Strategy for Soil Protection.

The Provision of Commission services with soil information and scientific as well as technical assistance in negotiating the Thematic Strategy for Soil Protection

and the proposal for a Soil Framework Directive through the EU Institutions and their subsequent implementation at Community and Member State level.

The extension of the coverage of the European Soil Information System (EUSIS) towards a fully operational Global Soil Information System (GLOSIS), providing relevant soil information for the implementation of multilateral environmental agreements, like UNFCCC, CBD and UNCCD, and contributing to the ground segment of the Global Monitoring for Environment and Security (GMES).

Objectives :

- 01.00: To implement the European Soil Data Centre (ESDAC) according to the "ESDAC Implementation Plan 2007-2009" as agreed with DG Environment, EUROSTAT and the European Environment Agency (support to EEA)(in collaboration with action ENSURE).
- 02.00: To define the data specifications for the soil theme within the INSPIRE directive transposition phase in collaboration with a Working Group to be established within the European Soil Bureau Network, with possible contributions from national institutes that are responsible for INSPIRE transposition (in collaboration with action INSPIRE).
- 03.00: To perform research and development of advanced modelling techniques, indicators and scenario analyses in relation to the major threats to soil (erosion, decline of organic matter, compaction, salinisation, landslides, sealing, contamination, and loss of soil biodiversity).
- 04.00: To support the Commission's services responsible for the negotiation and implementation of the Thematic Strategy for Soil Protection and the proposal for a Soil Framework Directive through the EU Institutions with appropriate scientific and technical input.
- 05.00: To develop the Global Soil Information System (GLOSIS) (in collaboration with action MONDE and DESERT).
- 06.00: To implement the full integration of the soil information from Turkey and Northern Eurasian countries within the European Soil Data Centre (Support to Candidate Countries)
- 07.00: To further develop exploratory research activities on Digital Soil Mapping (Exploratory research)

Deliverables :

- 2008-01-01 01.01: Progress Scientific and Technical report to DG Environment , European Environment Agency and EUROSTAT on the implementation of the ESDAC, including the full integration of the soil contamination data and information for Europe. (3

- 2008-01-01 01.02: Operational web based European Union soil portal maintained and improved (31/12/2008)
- 2008-01-01 01.03: Revised SPADE (Soil Profile Analytical Database of Europe) data incorporated into European Soil Data Centre in support to the European Food Safety Authority (EFSA) (31/12/2008)
- 2008-06-04 02.01: Scientific and Technical Report on soil data specifications submitted to the INSPIRE consolidation team (31/12/2008)
- 2008-06-04 03.01: Scientific and Technical Reports and maps on the nature, position and magnitude of the agricultural soil protection problem in Europe delivered to the JRC's institute for Prospective Technological Studies (SoCo project) (30/03/200)
- 2008-06-04 03.02: Scientific and Technical Report on a case study covering the Region Marche (Italy) on soil/land management and policy measures for soil conservation, delivered to the JRC's Institute for Prospective Technological Studies (SoCo pro
- 2008-06-04 03.03: Scientific and Technical Report from a workshop in Italy to present and discuss the main results of the SoCo project with local agricultural and other stakeholders, relevant NGOs, representatives of the authorities and policy-make
- 2008-06-04 03.04: Scientific and Technical Report on review of risk assessment methodologies (Risk Assessment Methodologies for Soil, RAMSOIL project) (31/12/2008)
- 2008-06-04 03.05: Scientific, Technical Reports, training courses and maps of Arsenic and Selenium in soils of Europe derived from the AquaTRAIN project "Geogenic Chemicals in Groundwater and Soils, an European Research Training Network" (Geogenic
- 2008-06-04 04.01: Scientific and technical reports from the two ESBN working groups on the new 1:250,000 Georeferenced Soil Database of Europe and the delineation of risk areas according to the Soil Framework Directive. (31/12/2008)
- 2008-06-04 05.01: Printed Atlas and an introduction paper on Northern Circumpolar Soils (31/12/2008)
- 2008-06-04 05.02: Final draft of the Soil Atlas of Africa submitted for printing (31/12/2008)
- 2008-06-04 06.01: New fully updated with revised pedotransfer rules and quality controlled version of the Soil Geographical Database of Europe including Turkey and Northern Eurasian parts, integrated in the European Soil Data Centre (31/12/2008)
- 2008-06-04 07.01: Scientific and Technical Report from the American Association for the Advancement of Science conference 2008 special session on soil (31/3/2008)
- 2008-06-04 07.02: Scientific and Technical Report and database on estimation of above ground biomass production in England and Wales using Digital Soil Mapping techniques. (31/07/2008)

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