EUROPEAN COMMISSION / European Research Area / Environment

EARTH OBSERVATION

GEOVIQUA

AT A GLANCE

Title: QUAlity aware VIsualisation for the Global Earth Observation system of systems

Instrument: FP7, ENV.2010.4.1.2-2

Total Cost: 4,024,256.41 Euro

EC Contribution: 3,266,803.98 Euro

Duration: 3 years

Start Date: 01/02/2011

Consortium: 10 partners from 6 countries

Project Coordinator: Joan Masó

Project Web Site: www.geoviqua.org

Key Words: Spatial quality, visualization, geo-search, GEOLabel, Earth Observation, SBA.

THE CHALLENGE

PARTICIPANTS IN GLOBAL EARTH OBSERVATION SYSTEM OF SYSTEMS (GEOSS) USE DIVERSE QUALITY CONTROL AND QUALITY ASSESSMENT PROCEDURES. GEOSS MAIN WINDOW IS THE GEOPORTAL THAT PROVIDES GOOD SEARCH AND VISUALIZATION ON EO PRODUCTS BUT QUALITY METADATA IS FREQUENTLY DIFFICULT TO FIND BY USERS. ONCE FOUND IT CAN BE HARD TO INTERPRET AND COMPARE.

GEOVIQUA SOLVES THESE ISSUES BY ADDING RIGOROUS QUALITY SPECIFICATIONS TO THE GEOSS SPATIAL DATA IN ORDER TO IMPROVE RELIABILITY IN SCIENTIFIC STUDIES AND POLICY DECISION MAKING.

PROJECT OBJECTIVES

IMPROVE THE GEOSS COMMON INFRASTRUCTURE, GCI, (REGISTRIES AND CLEARINGHOUSES) PROVIDING THE USER COMMUNITY WITH INNOVATIVE QUALITY-AWARE VISUALISATION AND ADVANCED GEO-SEARCH CAPABILITIES MAKING THEM AVAILABLE THROUGH THE GEOPORTAL AND OTHER END-USER IMPLEMENTATIONS.

ATTACH STANDARD QUALITY PARAMETERS TO CURRENT METADATA MAKING IT AVAILABLE TO USERS AND EXPERTS, PRODUCING MORE RELIABLE STUDIES ABOUT EARTH SYSTEMS AND THEIR DYNAMICS, AND TAGGING SPATIAL INFORMATION BY MEANS OF A QUALITY LABEL: THE GEOLABEL.

Methodology

Current quality information will emerge when GeoViQua methodologies are applied, such as: Quality elicitation from metadata, quality control and user feed-back. Formalized and standardized quality indicators will be embedded and linked to data allowing data comparison on catalogue searches and integrating quality measures on data visualization browsers. Criteria for a GEOLabel definition can be inferred from the knowledge gain through the project; its application will be agreed with broader audience (OGC, ISO, QA4EO, etc).

Methodology will be tested in several pilot cases covering most of the Societal Benefit Areas (SBA).

Expected Results

Formalizing a quality framework to be used in the different SBA and related Earth Observation Products.

A set of best practices and indicators to make quality easy to use into scientific studies and decision making conclusions.

Contribute to the GEOSS Common Infrastructure with tools for search based on quality indicators and for visualizing quality measures while browsing datasets that will be integrated in the GeoPortal.

Certify GEOSS datasets that follow standard procedures with GEOLabel.

Project Partners	
CENTRE DE RECERCA ECOLÒGICA I APLICACIONS FORESTALS	Spain
UNIVERSITAT AUTONOMA DE BARCELONA	Spain
52°North Initiative for Geospatial Open Source Software GmbH	Germany
FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V	Germany
CONSIGLIO NAZIONALE DELLE RICERCHE	Italy
ASTON UNIVERSITY	United Kingdom
THE UNIVERSITY OF READING	United Kingdom
COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES	France
EUROPEAN SPACE AGENCY	France
SCIENCE AND TECHNOLOGY B.V.	Netherlands