

The GEOSS Portfolio for Science and Technology

GEOSS and Science and Technology

The Global Earth Observation System of Systems (GEOSS) has a bilateral relationship with science and technology (S&T). GEOSS depends on input from S&T communities and cannot evolve to meet rapidly expanding user needs without this input. At the same time, GEOSS is a unique source of Earth observation data and related products that are essential for research in all nine of the Societal Benefit Areas (SBAs) of Earth observations. Moreover, the technological challenges of implementing GEOSS stimulate new developments in many technology communities. Therefore, GEOSS needs to nurture links to relevant S&T communities both by promoting the use of GEOSS in these communities and by encouraging contributions from these communities to GEOSS.

Engaging Science and Technology Communities in GEO

The Road Map of the Group on Earth Observations (GEO) Science and Technology Committee (STC) includes a number of activities focused on engaging relevant S&T communities in GEOSS. One of these activities aims to promote awareness and benefits of GEOSS in S&T communities with the goal of achieving breakthroughs in the understanding of the Earth's changing environment and the global integrated Earth system. One goal of this activity is to encourage the scientific community to collaborate within GEO to address interactions between the components of the global integrated Earth system, and to connect natural and socioeconomic sciences.

A Portfolio Showing GEOSS at Work for Science and Technology

In order to stimulate broader involvement of S&T communities in GEOSS, both as users and contributors, GEO Task ST-09-02 is compiling a portfolio of examples showing how GEOSS serves S&T communities in their work. This portfolio illustrates the broad range of benefits for S&T communities getting involved in GEOSS, be it as credited and valued contributors, users who benefit from the data sharing, or individuals and groups benefiting from stronger links to end users. The compelling examples selected as of October 2010 are listed in Table 1.

Table 1. GEOSS Portfolio for Science and Technology Examples (October 2010)

SBA	Title	Contact
Water	Pilot Projects for Improved Water Discovery and Quality Assessments	Russell Lefevre
Climate	Capacity Building of Operational Oceanography and Climate Adaptation	Jun She
Climate	Year of Tropical Convection (YOTC)	Mitchell W. Moncrieff
Ecosystems	enviroGRIDS Building Capacity for a Black Sea Catchment Observation and Assessment System Supporting Sustainable Development	Anthony Lehmann
Biodiversity	Protected Areas Monitoring Pilot	Eamonn O Tuama
Agriculture	The Harmonized World Soil Database (HWSD) as a First Step Towards a Global Soil Information System	Luca Montanarella
Health	Using Earth Observations to Benefit Health	Pai-Yei Whung
Cross-cutting	European Observatory Network	Maureen Pagnani

Outstanding Projects Illustrating GEOSS' Service for Science and Technology

Illustrative examples have been identified in cooperation with GEO Tasks. Following a careful search of available reports and documentation, more than 30 invitations were extended for submission of proposals. The proposals received by October 2010, have been reviewed by the ST-09-02 Task team using a predefined review form and a quantitative rating system. So far, eight proposals have been selected for inclusion in the portfolio. These examples demonstrate the benefits of GEOSS for S&T communities. GEOSS provides access to many services, data sets, and products of value for scientists, researchers, and developers. In many cases, new research is enabled that would not have been possible without access to the Earth observation products accessible through the GEO portal. The selected examples show how the products accessible through the GEOSS Common Infrastructure (GCI) work for S&T communities.

A Living Portfolio of GEOSS

The selected examples in the portfolio already form an impressive collection that demonstrates the benefits of GEOSS for S&T communities. As GEOSS evolves, this portfolio will have to change and expand. Because of the dynamic nature of the portfolio, a Web site will be at the core of the portfolio publication. This Web site will provide information about the motivation and goals of the portfolio examples, as well as background information on the relevance of a well-developed relationship between GEOSS and S&T communities. Each example will be introduced and include links to the external Web pages maintained by the teams responsible for the examples. There are plans to complement the Web-based "living portfolio" with a print version once the portfolio contains a representative number of examples that cover the SBAs and cross-cutting themes. Videos and slide shows for individual examples also will be created and made available on the portfolio Web site. The initial layout of the home page of the portfolio Web site is depicted in Figure 1.

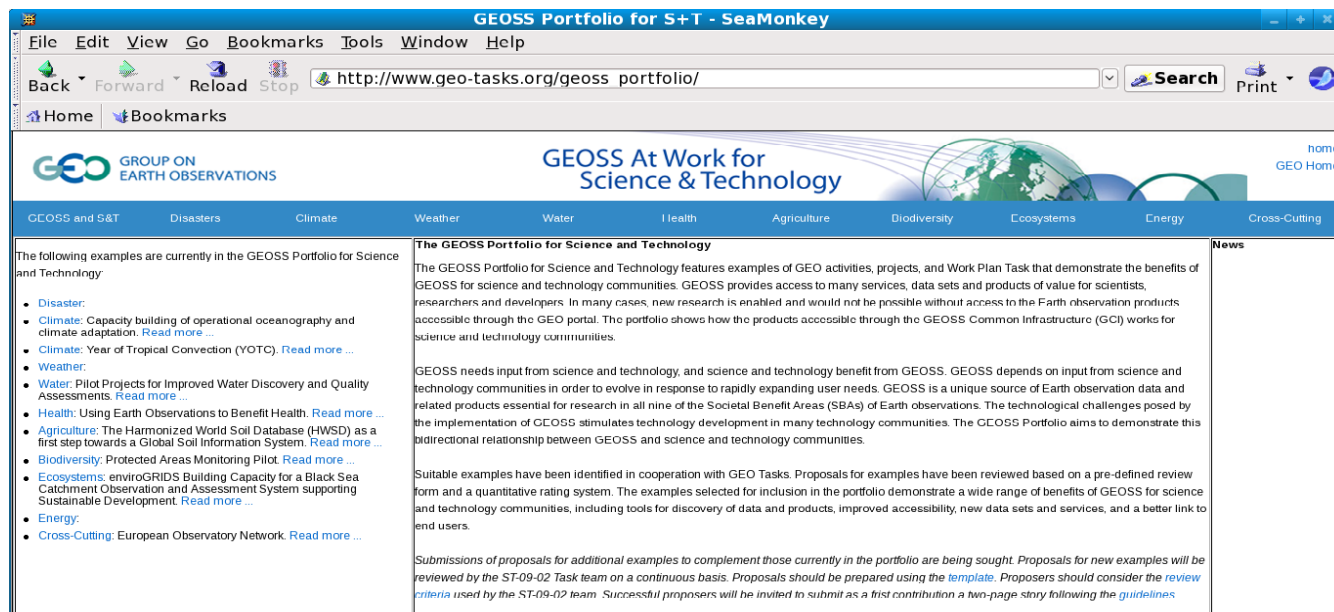


Figure 1. Initial Home Page of the GEOSS Portfolio for Science and Technology

Your Contribution Could Make the Portfolio More Useful

Additional examples to complement those currently in the portfolio are being sought. Proposals for new examples are invited and will be reviewed by the ST-09-02 Task team on a continuous basis. A template for the submission of proposals is available at http://www.geo-tasks.org/geoss_portfolio.

For More Information

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