



International funding of geoscience: The development of collaborative funding mechanisms of GEOSS

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The Group on Earth Observations (GEO) is coordinating efforts to build a Global Earth Observation System of Systems, or GEOSS. The lack of dedicated funding to support specific S&T activities in support of GEOSS is one of the most important obstacles to engaging the S&T communities in its implementation. This problem can be addressed by establishing explicit linkages between research and development programmes funded by GEO Members and Participating Organizations and GEOSS.

In appropriate funding programs, these links may take the form of requiring explanations of how projects to be funded will interface with GEOSS and ensuring that demonstrating significant relevance for GEOSS is viewed as an asset of these proposals, requiring registration of Earth observing systems developed in these projects, or stipulating that data and products must adhere to the GEOSS Data Sharing Principles.

Examples of Earth observations include:

- Measurements from ground-based, in situ monitors;
- Observations from Earth satellites;
- Products and predictive capabilities from Earth system models, often using the capabilities of high-performance computers;
- Scientific knowledge about the Earth system; and,
- Data visualization techniques.

These examples of Earth observations activities requires different types of resources, R&D top-down, bottom-up funding and programs of various sizes. Where innovation and infrastructure are involved different kind of resources are better suited, for developing countries completely other sources of funding are applicable etc.

The European EGIDA project are coordinating the development of a funding mechanism based on current international funding instruments such as the European ERANet, the new Joint Programming Initiatives, ESFRI as well as other European and non-European instruments. An general introduction to various strategies and fundings instruments on international and regional level will be presented together with a proposed first step of a particular funding mechanism for both the implementation and sustained operation of GEOSS.

Resources and capacity building is an integral part of modern international research collaboration. Funding instruments have to be in place to facilitate free, open, authoritative sources of quality data and general scientific results.