

Sub-task Number: US-09-02a

Sub-task Title: Socio-Economic Benefits of GEO and GEOSS

Overarching Task: Socio-Economic Indicators

Area: USER ENGAGEMENT

Relevant Committee: UIC

Related Targets: (to be included in 2009)

Sub-task Definition (as given in the 2009-2011 Work Plan):

Build upon the GEOBENE project (Global Earth Observation - Benefit Estimation: Now, Next and Emerging) to assess Earth observation benefits and GEOSS added-value (including cooperation and data sharing). Define test-cases and develop methodologies and analytical tools in each of the nine GEOSS societal benefit areas. In particular develop integrated models that will also serve as effective decision-making tools to evaluate impacts and benefits of multiple scenarios across societal benefit areas. Such models will be also used in the framework of the European project EuroGEOSS – to assess the GEOSS added value to multi-disciplinary interoperability and modelling.

Leads (GEO Member or PO, Entity carrying out the work, Contact: e-mail):

IIASA (GEOBENE), Point of Contact: Michael Obersteiner, oberstei@iiasa.ac.at

EC(EuroGEOSS), Massimo Craglia, Massimo.craglia@jrc.it

USA (NASA), Lawrence Friedl, LFriedl@nasa.gov

Motivation/Background

Socio-economic benefits of GEOSS are potentially large. However, they are still poorly quantified which might in part explain underinvestment in this sector in many parts of the world. A full assessment of GEO and GEOSS and its benefits of integration has not yet been performed.

Outputs (e.g. products and services which result from the activities of the Task/sub-task; outlined in the form of deliverables with timelines)

Planned:

- A first-cut ex ante benefit assessment of GEO and GEOSS will be carried out using a scenario approach.
- Benefit assessment test cases serving as good practice guidance (GPG) in various SBAs.

Produced (current status):

- Socio-economic benefits have been assessed in particular sub-SBAs (e.g. improved weather forecasts in agricultural production planning). Most assessments were carried out in research mode.
- A variety of approaches and methods have been developed to carry out benefit assessments.

Activities (operations or work processes through which resources are mobilized to produce specific outputs; outlined in the form of milestones including timelines)

Planned:

A systems dynamics model will be developed with the aim to assess the total benefit streams of GEO and GEOSS. In addition, a number of strategically planned test cases in a number of interlinked (sub-) SBAs will be carried. These test cases will be designed in such a manner that they can serve as templates for similar assessment studies. Particular focus will be devoted to the assessment of System-of-System effects.

Progress (current status):

GEOBENE's has so far produced methodologies and tool. Applications of these methodologies have been conducted in concrete case studies in all of the 9 SBAs. The current status of the project and descriptions of case studies can be viewed at www.geo-bene.eu. A template on how to conduct cost benefit assessments has been produced.

Resources (indication of resources – e.g. financial, human – contributed by GEO Members or Participating Organizations to produce outputs)

GEOBENE will contribute some 60 Person Month during 2009.

EUROGEOSS will contribute some 15 Person Months in 2009 (expected start of this project is May 2009) with further commitments in 2010-11.

Architecture and Data Component

1) Please briefly describe any task-related Earth observation resources (data set, system, website/portal) and any related Web Service interfaces that are contributed to GEOSS. State whether these items are or will be registered with the GEOSS Component and Service Registry for access via the GEO Web Portals, and whether any associated standards or other interoperability arrangements will be registered in the Standards and Interoperability Registry.

2) Please also describe what data and information your activity/system needs that you would request to be accessible through the GEOSS Common Infrastructure.

Capacity Building Component

There are two distinct end-user types for the use of GEO/GEOSS benefit assessment tools. The first group of End-users consists of GEO members using these tools for planning and evaluation purposes. The second group of end users of benefit assessment tools are quantitative policy consultants, both from the public and the private sectors, in all areas covering all 9 SBAs.

Benefit assessment (ex post and ex ante) should be come a continuous activity within GEO. Stronger outreach programs should be started in coordination with other CB tasks.

User Engagement Component

The tasks produces results which are directly relevant for policy making in all SBAs. Task members are directly engaged in a number of national and international policy or policy relevant processes such as those under the UNFCCC, CBD, and ISDR. It has also been noticed that private sector actors mainly from business consultancies have started to use methods and data used under this task

Science and Technology (S&T) Component

1) Please briefly describe the elements of scientific research or technological development contained in this Task.

2) In relation to the S&T component(s) of this task, please describe gaps, priorities, continuity needs, barriers, scientific expertise and additional resource needs (this information will be used for developing a gaps and needs assessment in Task ST-09-01)

Members and POs' Contributions to Outputs and Activities above:

(Input is optional. This section gives the chance to Members and POs to provide more details (3-5 lines) on their individual activities, making a clear connection with the Outputs and Activities outlined above).

Russia

Roshydromet: To develop the methodology of the planning of the multi-purpose observation systems for GEOSS.

EC

EuroGEOSS will contribute to the assessment of benefits and impacts of GEO and GEOSS through its dedicated workpackage on Impact Assessment.

Participation (Table to be filled in 2009):

Type	Member or PO	Representing	Contact Name	EmailAddress
Lead(PoC)	IIASA	International Institute for Applied Systems Analysis/GEOBENE	Michael Obersteiner	oberstei@iiasa.ac.at
Lead	EC	EuroGEOSS	Massimo Craglia	Massimo.craglia@jrc.it
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