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Acronym: EGIDA
Project title: Coordinating Earth and Environmental cross-disciplinary projects to promote GEOSS
Theme: ENV.2010.4.1.1-1
Theme title: Supporting the integration of European and international R&D programmes in GEO

D2.5 Framework for Sustained Operations

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Executive Summary

Deliverable D2.5 was generated within EGIDA Work Package 2: Support of GEO Task ST-09-01. EGIDA WP2 aims to actively engage and incorporate the Science and Technology communities in developing GEOSS, by providing direct support to the GEOSS Science and Technology Committee and implementation of GEO's Science and Technology Roadmap. WP2 concerns GEO Task ST-09-01 and specifically activities 1c (Assess the requirements for continuity and long-term monitoring) and 1e (Respond to Science and Technology needs and priorities).

This deliverable relates to both activities. It documents a framework for the sustained operation of the concrete outcomes of EGIDA WP2 beyond the timeframe and financial envelope of the project. This framework is carried by three specific recommendations to be taken to the Infrastructure and Development Implementation Board of GEO by one of its three co-Chairs. These are to:

- take a paper to IDIB during 2013 that summarises the two processes contained in EGIDA Deliverables and uses them to develop consensus on implementation;
- contact all the relevant parties and seek a meeting to discuss the place of the CIDB within the GEOSS e-Infrastructure; and
- at that meeting, to discuss the potential to maintain and develop the CIDB and create a user-friendly interface to both the database and any processes adopted by GEO, following the first recommendation.

The EGIDA WP2 leader is a co-Chair of the IDIB and will take these actions during 2013.

Contributing organisations: BGS (NERC) based on outputs developed by all WP2 partners

Contents

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Acronyms and Abbreviations

Abbreviation	Name
EC	European Commission
EO	Earth Observation
EU	European Union
FP7	Seventh Framework Programme
GEO	Group on Earth Observations
GEOSS	Global Earth Observation System of Systems
GMES	Global Monitoring for Environment and Security
S&T	Science and Technology
SBA	Societal Benefit Area
IDIB	(GEO) Institutions and Development Implementation Board
T	Task
WP	Work Package

1. Introduction

EGIDA WP2 had resulted in a number of outcomes that have the potential to contribute to GEO and GEOSS beyond the end of the project lifespan. These consist of:

1. A process for assessing the relevance of observational infrastructure to GEOSS
2. A process for communicating scientific priorities in Earth Observation in GEO
3. Continuity Indicators for observational infrastructure
4. A Continuity Indicator Database (CIDB)
5. Assessment of the CIDB, including suggestions for its future applications
6. A description of Web Services that could be developed to make the CIDB more accessible and user-friendly and to provide an on-line front end to the processes

Within the timescale and funding envelope of the project, it was only possible to develop these outcomes but not to secure them in a sustainable home within GEO and GEOSS. It was anticipated that this would be the case. This, Deliverable (D2.5) was included in the project in order to set out the steps that will be taken to achieve this toward the end of the project and once EGIDA ends.

In the event, the restructuring of GEO at the end of 2011 exacerbated the problem, making this deliverable all the more relevant. WP had been working towards the GEO Science and Technology Committee, reporting to them regularly on progress, but the STC was disbanded. Its function was taken on in part by a new Institutions and Development Implementation Board and also by their Tasks ID-03 and ID-05, including invaluable interactions with the GEO Science and Technology Stakeholders Forum. It is the IDIB that provides the main framework for sustaining these EGIDA outcomes from January 2013 onwards. This deliverable sets out how this will be made to happen in three cases:

- The processes
- The database
- Web Services

2. Sustaining the Processes

WP2 developed two processes that are of future interest to GEO:

- Methodology and process for the evaluation of the relevance of specific observation infrastructure to the GEOSS
- Process for communicating scientific priorities in Earth Observation

In the first 7 years of GEO, a lot of attention was paid to the e-Infrastructure, through the creation and development of the GCI. This was necessary in order to deliver Earth Observation data to users in a consistent way, paying heed to interoperability and other important issues in information systems development and deployment. This has turned the GCI into one of the most evolved parts of GEOSS and ensured that GEO has an asset to show to the world, championed first by the Architecture and Data Committee and now by the Infrastructure Implementation Board. At the same time, it could be argued that the Earth Observation system that feeds the GCI with data has had rather less attention. Members and Participating Organisations contribute hugely significant Earth Observation assets to GEOSS without which it could not exist but the maintenance and development of this aspect of GEOSS has perhaps been somewhat taken for granted. It has lacked a champion with the same ability to focus on one key objective.

My proposal is for the IDIB to take on this role. As it has responsibility for science and technology in GEO, it is already a natural home for the process on science prioritisation for Earth Observation. It could be argued that this combination also makes it the best home for the assessment of observational infrastructure. Of course, as with any process in GEO, many other stakeholders have an interest in both of these processes and IDIB could need to involve them, as described in the relevant Deliverables D2.1 and D2.7. But in terms of championing the observing system, as distinct from the e-Infrastructure, and taking a view of science priorities for EO technology across GEO, it can be the champion.

Recommendation 1: The WP2 leader is co-Chair of IDIB. He should take a paper to IDIB during 2013 that summarises the two processes contained in EGIDA Deliverables and uses these to develop consensus on a way of implementing them.

3. Hosting the Continuity Indicator Database

The CIDB is a piece of e-Infrastructure. It has been developed as a stand-alone MS Access database, however, and at present can be downloaded from the EGIDA Website. Despite this, it links GEOSS Components to the User Requirement Registry. Thus, it is a good candidate for inclusion in the GCI. In order to sustain it in future and make it more accessible, it should be hosted within GEO's web pages somewhere more appropriate. The only question is, where?

There are several candidate locations, including GEO's main website, the GEO Portal or the Registries. In late 2012, a strong contender emerged from Task ID-03 as being the GEOSS Science and Technology Software Suite GSTSS. The IDIB agreed in late 2012 that a meeting should be arranged in 2013 of the relevant players to assess the future home for the CIDB. Of course, in this particular case the Infrastructure Board has a strong interest in the issue and should also be involved.

Recommendation 2: The WP2 leader, as a co-Chair of the IDIB, should contact all the relevant parties and seek a meeting, to discuss the place of the CIDB within the GEOSS e-Infrastructure, alongside any other relevant topics from the GSTSS and others.

4. Web Services

In addition to being hosted on a more appropriate website, the CIDB could quite easily be given a more user friendly interface so that its nature as a database is hidden from users and it appears more like an application. Over time, its functionality could also be increased and improved. For example, the testing described in D2.4 identifies university teaching applications, which were not envisaged when the CIDB was being developed. These could be better supported by a more evolved application. There is also the issue of sustained maintenance and development. Within EGIDA project timeframes and funding envelopes, it was only possible to design and develop a prototype CIDB. A cut-off date had to be defined beyond which it would no longer be developed, so it could be delivered. In seeking a future home for it on an appropriate website, we should also address the maintenance and development of the database sitting behind any web interface.

The processes identified in section 2 are also amenable to web hosting. A web page that acts as the gateway for nominations, gathers the supporting information and distributes this to the interested parties could form an efficient front end to both the identified new processes. This could be analogous to the sites operated by journals to support the peer review process. There would be resource required to create it but its operation should be less onerous. The processes behind the interface would take advantage of existing GEO structures such as the Boards and the Secretariat. Nevertheless, there are some resource implications and these should be explored with all affected parties.

Recommendation 3: The meeting called by the WP2 leader, as co-Chair of the IDIB, should also discuss the potential to maintain and develop the CIDB and a user-friendly interface to both the database and any processes adopted through Recommendation 1.

5. Summary

EGIDA WP2 developed a number of outcomes worthy of sustained operation within GEOSS, including a Continuity Indicator Database and two new processes for further consideration by the GEO community. This short report proposes a framework for their sustained operation after EGIDA concludes through the offices of the Institutions and Development Implementation Board, in the first instance, but ultimately involving all other relevant parties. This is carried forward by three specific recommendations for action that will be pursued by the co-Chair of the IDIB.