Gap analysis of the European Earth Observation Networks

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Introduction

Despite the large number of satellites and in-situ services providing data about the current status of the earth, a glance of the European EO networks reveals that there are still some issues that are not being met; some gaps in specific themes or some thematic overlaps between different networks.

This situation requires a clarification process of the actual status of the EO European networks in order to set priorities and propose future actions that will improve the European EO networks. The aim of this work is to detect the existing gaps and overlapping problems among the European EO networks.

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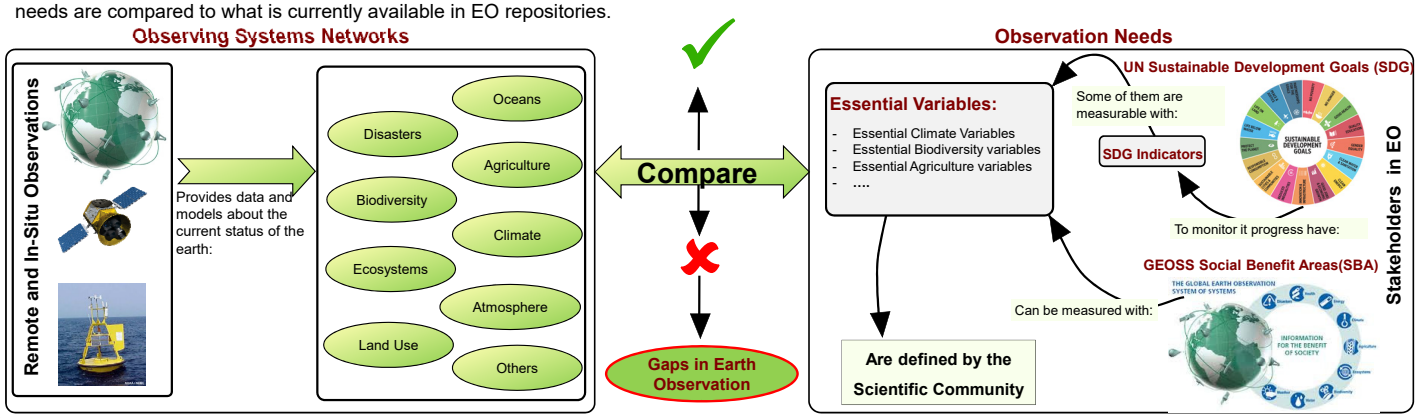
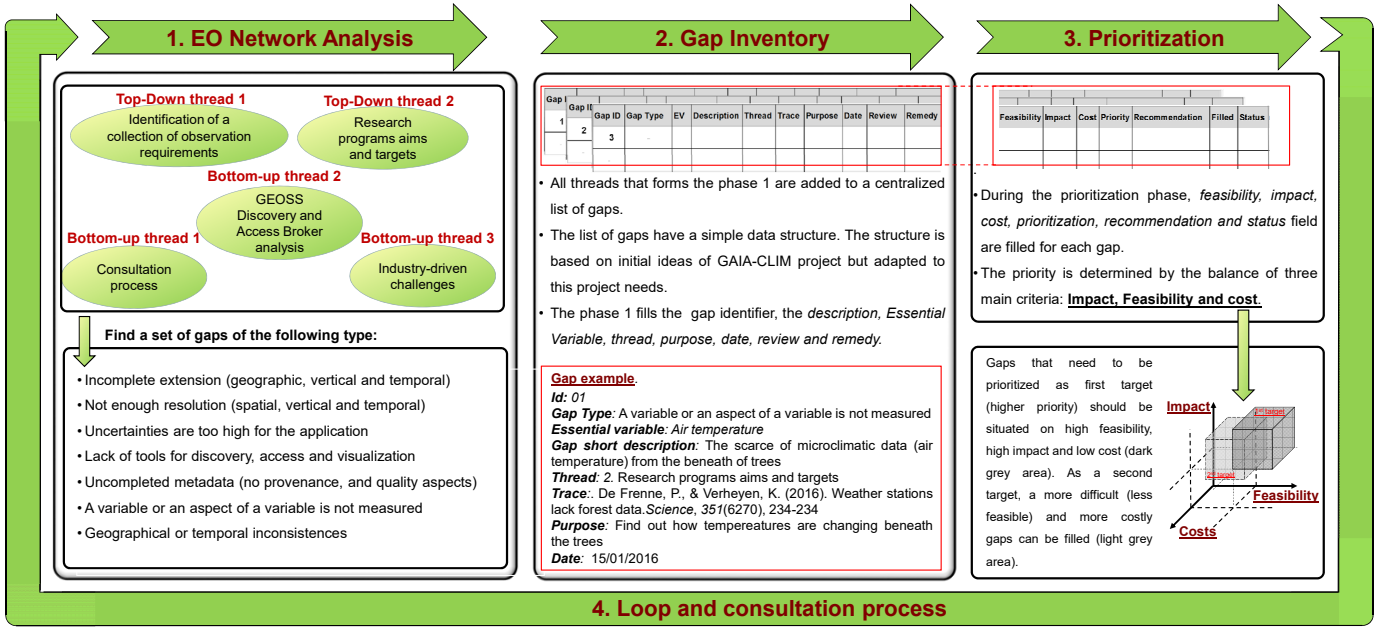
Gaps in European Earth Observation Network

The EO stakeholders have defined a list of themes or thematic areas of interest that are considered strategic to proper monitor the status of the earth (like UN Sustainable Development Goals or GEOSS Social Benefit Areas). These thematic areas can be measured with a (small) number of Essential Variables (EV) that are essential to characterize the state and trends in a system without losing significant information. Thus, the EV defines the EO requirements or needs. These EO needs are compared to what is currently available in EO repositories.



Gaps Analysis Workflow



Gaps Analysis methodology description

- Gaps in EO are identified following a methodology structured in 5 threads; identification of observation requirements, incorporation of international research program material, consultation process in the current EO, GEOSS Discovery and Access broker Analysis and industry-driven challenges.
- All the gaps are centralized in a gaps DB that will be produced and maintained by the project consortium.
- A prioritization process is done in order to generate a final sorted list of gaps to inform the funding agencies and generate recommendations.
- The gap analysis and prioritization done by the project could contain missing points or misunderstandings. For that reason, the project is structured in two loops with a consultation process in between to help in reviewing the gaps, formulate remedies, assessment of impacts, feasibility and cost.

Intermediate results

The gaps identification process of the European Earth Observation Networks is still on going. Thus, we can not provide final results or formulate a final conclusions.

To date, the project have been focused mainly in the **EO Network analysis** and in the **Gap inventory generation** (*phase 1 and phase 2*). 38 gaps have been detected so far, most of them belongs to the thread 2.