

Overview of Implementation mechanisms and Criteria

	GEO Community Activities	GEO Initiatives	GEO Flagships	GEO Foundational Tasks
Purpose / character	develop, test, or demonstrate application(s); bottom-up	pilot or prototype service(s); top-down	pre-/near- operational service(s) top-down	enabling or support function(s) top-down
Criteria	<p>Objective(s) shared by a group of interested partners;</p> <p>Multi-national stakeholder group or scope; and</p> <p>Relevance to GEO's Strategic Objectives.</p>	<p>All criteria for Community Activities. In addition:</p> <p>User need or application perspective identified;</p> <p>Pilot or prototype information service or product developed or demonstrated;</p> <p>Contribution to satisfying user need;</p> <p>Sufficient resources for activities identified and committed;</p> <p>Clear relevance to GEO's Strategic Objectives demonstrated;</p> <p>GEOSS Data Sharing and Data Management Principles implemented;</p> <p>Implementation Plan;</p>	<p>All criteria for GEO Initiatives, in addition:</p> <p>Policy mandate from international treaty, convention, programme, or strongly articulated policy obtained;</p> <p>Substantial activity in terms of resources and partners involved;</p> <p>Information service or product <u>pre- or near-operationally</u> provided;</p>	<p>Implement/supports GEO Core Function</p> <p>Sufficient resources, identified and committed in GWP</p> <p>Description in the GWP:</p>
User engagement	May vary, depending on activity.	Target user groups generally identified , with at least an advisory role.	Specifically identified , fully engaged, role in steering. User needs satisfied <u>to a significant degree</u>	May vary, depending on Task.
Initiated by	GEO Community	Specified Members, Participating Organization		GEO Secretariat
Accepted by	GEO Secretariat Director	GEO Programme Board	Plenary	Plenary (with GWP)

Annex 1: GEO Implementation Mechanisms

GEO employs different mechanisms to implement its Core Functions, i.e. any activity included in the GWPs. These serve to distinguish between more substantial activities with dedicated resources, and smaller-scale activities, often driven by best-effort initiatives of individuals or small groups. By implementing all actions adequately and appropriately, GEO focuses its resources on selected priorities and matches expectations with available capacity.

The four GEO Implementation Mechanisms are defined as follows:

- GEO Community Activities;
- GEO Initiatives;
- GEO Flagships;
- GEO Foundational Tasks.

1 GEO COMMUNITY ACTIVITIES

GEO Community Activities allow stakeholders to cooperate flexibly in a bottom-up fashion, with a low initiation cost, and can include a broad variety of activities. GEO Community Activities may, for example, define user needs, explore new frontier applications or demonstrate technical possibilities, or agree on specific observation or analysis protocols. They are often conceptual, investigative or developmental in nature. GEO Community Activities are typically smaller-scale undertakings with commitments for contributions often disparate, made at the level of institutions or individuals. Users may be involved to the extent that they have been identified and engaged.

GEO Community Activities may form spontaneously at the initiative of interested parties. All necessary resources may not be completely identified from the beginning and the objectives may be defined at a relatively general level. Corresponding to their disparate nature, the styles of management may vary considerably among different GEO Community Activities.

Examples of GEO Community Activities in the transitional GWP 2016 include the Global Urban Observation, and Information Task and the Global Water Quality Information Task.

1.1 Establishing GEO Community Activities

Any self-formed group within the GEO Community may propose GEO Community Activities at any time. Often, Communities of Practice (CoP) may be the natural frameworks within which ideas can be conceptualized and matured. The initiating groups develop brief proposals describing the activities, including its objectives, schedule, contributors and stakeholders. GEO Community Activities may also arise as a result of GEO's engagement activities or Memoranda of Understanding between the GEO Secretariat and other institutions.

The GEO Secretariat accepts proposed Community Activities into the GWP and associated Progress report, based on agreed criteria. Most importantly, the GEO Secretariat must verify that a proposed Community Activity is aligned with GEO's objectives and direction. The Secretariat may also make recommendations on a proposal with respect to, for example, augmenting contributions, improving coordination with existing GEO Initiatives or other GEO Community Activities, or sharpening support for GEO's Strategic Objectives.

GEO Community Activities may evolve into GEO Initiatives if and when they provide an Implementation Plan that is accepted by the GEO Programme Board.

1.2 Criteria for establishing GEO Community Activities

- Objective(s) shared by a group of interested partners;
- Multi-national stakeholder group or scope; and
- Relevance to GEO's Strategic Objectives.

1.3 Contributors

Primary contributors to GEO Community Activities are Participating Organizations, GEO Members (through their corresponding institutions or *in situ* international observation networks), and possibly other partners from the private sector. GEO Community Activities may also include contributions from individual citizens through citizen observatories.

1.4 Management and coordination

GEO Community Activities are self-organized and implement flexible arrangements defined by participants. The GEO Secretariat may facilitate communication and implementation through, for example, limited support in organizing meetings.

A Lead must be identified for the GEO Community Activity, who acts as an interface for the GEO Secretariat and other interested parties.

1.5 Reporting to GEO

The GEO Secretariat will seek information from GEO Community Activities (through the Lead) on progress and developments. Where such information can be obtained, it will be included in the annual GEO Progress Report.

1.6 Monitoring and Evaluation

The GEO Secretariat monitors the development of GEO Community Activities through regular interaction with the Lead. GEO does not evaluate Community Activities.

2 GEO INITIATIVES

GEO Initiatives allow Members and Participating Organizations to coordinate their actions and contributions towards a common objective within an agreed, yet flexible framework. They develop and implement prototype services according to GEO priorities. GEO Initiatives may, for example, demonstrate technical feasibilities through pilot services. GEO Initiatives concern activities for which the user communities are known at a general level (but may not yet have been fully defined in detail), where some products and services may exist (but may have not yet been fully consolidated), and where resourcing options have been identified (but may have not yet been fully identified or analyzed). Contributions are typically made in kind, including observation systems operated to serve the Initiative's objectives, models, funded projects, or other programmes.

GEO Initiatives have a clearly identified objective that responds to needs of GEO Members and Participating Organizations and an implementation plan setting out how that objective is to be achieved. Initial contributions by Members, Participating Organizations, and private sector players are identified to the extent known. Further commitments may often be sought during the implementation of the GEO Initiative. Relevant stakeholders should be engaged in the development of the Initiative, with the user community being integrated into the GEO Initiative as it develops. Clarifying user needs and consolidating communities should be an objective of GEO Initiatives.

Some GEO Initiatives may evolve into GEO Flagships if and when accepted by Plenary following a recommendation by the GEO Programme Board. However, GEO Initiatives may also be taken up

directly by a Participating Organization, or be discontinued if, in particular, their objective has been achieved. The implementation plan should outline any expectations with respect to the final phase of the Initiative.

2.1 Establishing GEO Initiatives

Any GEO Member, Participating Organization, or the GEO Secretariat may conceptualize and propose a new GEO Initiative based on a detailed Implementation Plan. These are discussed and further developed by those proposing the Initiative together with the GEO Programme Board. The SBA Working Groups should be involved when developing GEO Initiatives. Where Communities of Practice (CoP) can contribute to the development of the Implementation Plan, they should be engaged at an early stage. Their role is described in the implementation plan. The GEO Programme Board works to establish consensus concerning the proposed objectives and the implementation plan, and to ensure that a sufficient level of resources and contributions are committed for successful implementation of the GEO Initiative. All contributions – in kind or otherwise – are listed, described, and valued in the implementation plan. Contributions may include specific commitments from GEO Members, Participating Organizations, private sector partners, or other third parties. If and when this can be achieved, the GEO Programme Board may accept the new GEO Initiative.

By accepting a new GEO Initiative, GEO supports its objectives and commits or acknowledges the resources specified in the implementation plan.

2.2 Criteria for establishing GEO Initiatives

GEO Initiatives must meet all criteria used for Community Activities (see 1.2). In addition:

- User need or application perspective identified;
- Pilot or prototype information service or product developed or demonstrated;
- Contribution to satisfying user need;
- User institutions identified with plans to solicit their advice;
- Sufficient resources for activities identified and committed;
- Clear relevance to GEO's Strategic Objectives demonstrated;
- GEOSS Data Sharing and Data Management Principles implemented;
- Implementation Plan, detailing:
 - Objective(s), shared by partners;
 - The information service or product provided;
 - Schedule for implementation;
 - Perspective(s) for evolution;
 - Quantified, itemized resources, including from Members, Participating Organizations, private sector partners and the GEO Secretariat, enabling substantial progress towards objectives;
 - Partners, including target user groups;
 - Capacity Building activities
 - User representatives engaged, often in advisory roles;

- Governance and management mechanisms; and
- Monitoring and Evaluation procedures.

2.3 Contributors

Primary contributors to GEO Initiatives are typically Participating Organizations, GEO Members (through their corresponding institutions), and interested partners from the private sector. The specific contributions and the roles of the different contributors may vary between different GEO Initiatives and are described in the implementation plan.

2.4 Management and coordination

GEO Initiatives are generally managed as projects. The detailed arrangements may vary between different GEO Initiatives and are defined in the implementation plan. GEO Initiatives should have effective dedicated steering boards or similar mechanisms that oversee implementation of the Initiative. Members of the steering board should be representatives of those partners providing significant resources to the implementation. Representatives of user communities should also be engaged in the steering board, or advisory mechanisms, as appropriate.

GEO Initiatives may define their steering and advisory mechanisms according to their specific needs, though lessons may be learned from other Initiatives or Flagships.

Typically, an Initiative coordinator will be identified. They will typically be resourced by a contributing Member or Participating Organization. In some cases, the coordinator might be established within the GEO Secretariat. The coordinator is responsible for coordinating the implementation of the agreed implementation plan and reporting to GEO on progress and other related issues. A sufficiently resourced Initiative coordinator is an important criterion for accepting a new GEO Initiative.

2.5 Reporting to GEO

The Initiative coordinator is responsible for all reporting to GEO. This includes in particular:

- Progress reports in contribution to the annual GEO Progress Report. These will be reviewed by the GEO Programme Board; and
- Presentations to Plenary, the Executive Committee or the GEO Programme Board, as necessary.

Since many of the contributions will be made in-kind, further reporting will generally be required by individual contributors within their respective contexts.

2.6 Monitoring and Evaluation

Monitoring and evaluation activities are defined in the Implementation Plan. At a general level, the GEO Programme Board will monitor progress on the basis of the reports from the project coordinator and may recommend changes to the implementation, as needed.

3 GEO FLAGSHIPS

GEO Flagships differ from GEO Initiatives in that they respond to a referenced policy mandate, have matured to deliver a pre- or near-operational service, and serve user groups that are actively steering the Flagship. They are accepted by Plenary based on a GEO Programme Board recommendation.

GEO Flagships allow GEO Members and Participating Organizations to spin-up operational services serving common needs. They may operate for as long as they are able to generate sufficient impact to

attract support for their activities. Once the services reach a mature, operational stage, they may be taken up by user institutions (e.g. GEO Participating Organizations), for their continued operation over the long term. GEO Flagships have a clear policy mandate in a convention, treaty or programme. Contributions are typically made in-kind, including observation systems operated to serve the initiative's objectives, models, funded research projects or programmes, but may also include direct financial contributions or those that are earmarked within the Trust Fund as being in support of a particular GEO Flagship.

GEO Flagships have both a clearly identified objective and an implementation plan that describes how that objective is to be achieved. Corresponding contributions by GEO Members, Participating Organizations, and private sector players are identified at the outset. While these contributions must be sufficient to implement the initial objective of a GEO Flagship, additional contributions and partners may be added during implementation. The relevant user communities are fully engaged and assume a leading role in the implementation.

GEO Flagships may develop a service or services through to maturity, whereupon the service(s) may be taken up by a Participating Organization, or to be transferred into a new organization. The Implementation Plan outlines expectations with respect to the final phase of the Flagship.

Examples for GEO Flagships in the transitional GWP 2016 include the Global Forest Observation Initiative (GFOI) and the Global Agricultural Monitoring Initiative (GEO-GLAM).

3.1 Establishing GEO Flagships

GEO Flagships evolve from GEO Initiatives. When a GEO Initiative has matured in terms of service provision, stakeholder engagement, and is aligned with the priorities of GEO, the GEO Programme Board may recommend that Plenary accept an Initiative as a GEO Flagship. This recommendation and the corresponding Plenary decision are based on the implementation plan, which must clearly set out how the criteria for GEO Flagships are met. These include the pre-operational delivery of the necessary information, through products or services, to meet the needs of identified users. These users must be identified and involved in appropriate functions in the Flagship. The responsibility for further developing the Flagship implementation plan remains with the proposing team.

The GEO Programme Board may identify gaps in critical information to support the adequacy of the proposal vis-a-vis the criteria for Flagships. Where SBA Working Groups or Communities of Practice (CoP) can contribute to the development of the implementation plan, they should be engaged at an early stage, with their role described in the implementation plan. The GEO Programme Board works to establish consensus regarding the proposed objectives and the implementation plan and achieve a sufficient level of contributions for its successful implementation. All contributions – in kind or otherwise – are listed, described, and valued in the implementation plan. Contributions may include specific commitments from GEO Members, Participating Organizations, private sector partners, or other third parties. If and when this can be achieved, the GEO Programme Board formally recommends the new Flagship to Plenary.

By accepting a new GEO Flagship, GEO supports the Flagship's objectives and commits and/or acknowledges the resources specified in the Implementation Plan.

3.2 Criteria for establishing GEO Flagships

GEO Flagships must meet all criteria used for GEO Initiatives (see 2.2). In addition:

- Policy mandate from international treaty, convention, programme, or strongly articulated policy obtained;
- Substantial activity in terms of resources and partners involved;
- Information service or product pre- or near-operationally provided;
- User needs satisfied to a significant degree;

- Specific user institutions fully engaged, including mechanisms to enable steering and feedback by these, e.g. an active role in a Steering Board; and
- Implementation Plan (see 2.2), including also perspective(s) for operationalization.

3.3 Contributors

Primary contributors to GEO Flagships are typically Participating Organizations, GEO Members (through their corresponding institutions), and interested partners from the private sector. The specific contributions and the roles of the different contributors may vary between different Flagships and are described in the implementation plan.

3.4 Management and coordination

GEO Flagships are generally managed as projects; the detailed arrangements may vary among different GEO Flagships and are defined in the implementation plan. GEO Flagships should have effective dedicated steering boards that are oversee the Flagship implementation. Members of the Steering Board should involve user representatives and representatives of those partners providing significant resources to the implementation.

GEO Flagships may define steering and advisory mechanisms according to their specific needs, though lessons may be learned from other GEO Initiatives or Flagships.

Typically, a project coordinator will be appointed at the GEO Secretariat. The project coordinator is responsible for coordinating the implementation of the agreed Implementation Plan and reporting to GEO on progress and issues. A sufficiently resourced project coordinator is an important criterion for accepting a new GEO Flagship.

3.5 Reporting to GEO

The project coordinator is responsible for all reporting to GEO. This includes in particular

- Progress reports in contribution to the annual GEO Progress Report. These will be reviewed by the GEO Programme Board;
- Presentations to Plenary; and
- Presentations to the Executive Committee or the GEO Programme Board, as requested.

GEO Flagships will generally establish Steering or Advisory Groups. These mechanisms are defined in the Implementation Plan. Also, as many of the contributions will be made in-kind, further reporting will generally be required by individual contributors within their respective contexts.

3.6 Monitoring and Evaluation

The required monitoring and evaluation activities are defined in the Implementation Plan. At a general level, the GEO Programme Board will monitor progress on the basis of the reports from the project coordinator and may recommend changes to the implementation, as needed.

4 GEO FOUNDATIONAL TASKS

GEO Foundational Tasks allow GEO to implement selected, enabling tasks to achieve GEO Strategic Objectives and Targets. These include coordination actions, gap analyses, the implementation of technical elements for accessing GEOSS, and other routine operations of the GEO Secretariat. Thus, they provide important support functions to GEO Flagships, GEO Initiatives, and GEO Community Activities. The Core Functions set out in the *GEO Strategic Plan 2016-2025: Implementing GEOSS* are the primary reference for these functions. Contributions are often made available from the GEO

Trust Fund and may be complemented by further contributions – either directly or in kind – from GEO Members, Participating Organizations, or other partners.

The GEO Secretariat frequently plays a central role in implementing Foundational Tasks or coordination to ensure good progress towards its Target.

Examples of GEO Foundational Tasks in the transitional GWP 2016 include the operation and evolution of the GEOSS Common Infrastructure, the implementation of data sharing and management principles, or the protection of radio frequencies required for Earth observations.

4.1 Establishing GEO Foundational Tasks

GEO Foundational Tasks are included in the GWP and are accepted by Plenary when it accepts each GWP in its totality. The GWP is proposed by the GEO Secretariat. It includes an indication of the resource contribution from the GEO Trust Fund, staff resources from the GEO Secretariat, and direct or in-kind contributions from GEO Members, Participating Organizations and other partners. Requests for additional funds that have not been made available from the Trust Fund, GEO Members, and Participating Organizations are also set out in the GWP. Further detailed documentation on the activity may be maintained by the GEO Secretariat.

By accepting the GWP GEO commits to resource the activities it contains at the levels indicated in the GWP.

4.2 Criteria for establishing GEO Foundational Tasks

- Implements or supports the implementation of at least one of the GEO Core Functions;
- Sufficient resources identified and committed in GWP;
- Description in the GWP detailing:
 - Objective(s) and Target(s) to be addressed;
 - Specific deliverable to be produced;
 - The activities planned over the period covered by the GWP;
 - Schedule for implementation;
 - Cost and resources, including from the GEO Trust Fund, Members, Participating Organizations, and private sector partners;
 - Requests for additional resources linked to specific activities; and
 - Role of the GEO Secretariat and other actors.

4.3 Contributors

Primary contributors to GEO Foundational Tasks are GEO Members, Participating Organizations, and further partners. GEO Members and Participating Organizations also contribute through allowing the GEO Secretariat to use staff and financial resources on the Foundational Tasks.

4.4 Management and coordination

Depending on the specific case, GEO Foundational Tasks may be directly implemented by the GEO Secretariat according to its internal management or by other mechanisms such as a Working Group coordinated by the GEO Secretariat. Advisory mechanisms may be set up for individual Foundational Tasks, as needed.

4.5 Reporting to GEO

The GEO Secretariat will report in annual GEO Progress Report on the activities, progress and issues in GEO Foundational Tasks.

At its own initiative or at the request of GEO SBA Teams the GEO Secretariat brings particular items to the attention of GEO, such as to Plenary, the Executive Committee, or the GEO Programme Board.

4.6 Monitoring and Evaluation

The GEO Programme Board reviews the progress towards the implementation of GEO Foundational Tasks based on the annual GEO Progress Report. The GEO Secretariats regularly arranges and conducts independent evaluations of the Foundational Tasks.

Annex 2: GEO Work Programme Development

1. INTRODUCTION

The GEO Work Programme (GWP) presents the activities that GEO undertakes to implement its Core Functions. It describes GEO Community Activities, GEO Initiatives, and GEO Flagships, and defines GEO Foundational Tasks. The GWP serves two functions:

- It is used by GEO Members and Participating Organizations to agree on priorities and activities, including the use of the resources made available through the GEO Trust Fund and the GEO Secretariat. By quantifying resources needed for the activities including and valuating the contributions committed, the GWP provides a tool to match ambitions with available resources; and
- It provides an overview of GEO's plans, thus serving as a basis to help stakeholders align their contributions. The GWP is complemented by annual GEO Progress Reports on the developments within GEO Community Activities, GEO Initiatives, GEO Flagships, and GEO Foundational Tasks.

A GWP Reference Document is maintained by the GEO Secretariat, complementing the GWP itself. It contains important background information on principal objectives of the actions in the GWP, their link to GEO Targets and Strategic Objectives, and on monitoring and evaluation activities. Thus, it represents a compilation of the implementation plans of GEO Flagships, GEO Initiatives and other relevant documents.

2. GEO WORK PROGRAMME

The GWP is proposed by the GEO Secretariat based on input from GEO Members, Participating Organizations, and the greater GEO Community. It strives to optimally pursue the realization of the Strategic Objectives through implementation of GEO's Core Functions constrained by the identifiable resources. It is further developed by the **GEO Programme Board**, which

- ensures alignment with the priorities of GEO Members and Participating Organizations;
- identifies resource commitments by GEO Members and Participating Organizations; and
- provides recommendations to Plenary for approval, in accordance with the Implementation Mechanisms description.

Thus, the GWP implements a top-down mechanism towards the selection of GEO activities. It should be noted that the GWP does not, in itself, guarantee that the activities it contains are sufficient or effective in implementing GEO Core Functions or realizing GEO's objectives. This type of analysis should be performed through dedicated actions for monitoring progress and evaluation of the activities undertaken.

The GWP is presented for acceptance by **GEO Plenary**. By accepting the GWP, GEO:

- **Accepts** that the GEO Foundational Tasks should be implemented with the resources indicated; and
- **Takes note** that the GEO Flagships, GEO Initiatives and GEO Community Activities are expected to be implemented with the corresponding indicative resources.

3. 2016-2025 WORK PROGRAMMES

The GWP for 2016 represents a transitional GWP, serving as a bridge from the first 10 years of GEO (2005-2015) to the next ten years.

The subsequent GWPs will cover three-year time periods. This will allow implementing longer-term activities coherently. The following GWPs are:

- GWP 2017-2019 – developed by the GEO Secretariat, in consultation with the GEO Community, together with the GEO Programme Board during 2016;
- GWP 2020-2022 – developed by the GEO Secretariat in consultation with the GEO Community, together with the GEO Programme Board during 2018-19; and
- GWP 2023-2025 – developed by the GEO Secretariat in consultation with the GEO Community, together with the GEO Programme Board during 2021-2022.

GEO may accept revisions of the multi-annual GWPs at the annual Plenary meeting, based upon recommendations of the GEO Programme Board.

4. DEVELOPMENT OF THE GEO WORK PROGRAMME

The development of the GWP is coordinated by the GEO Secretariat. The transitional GWP 2016 was developed in consultation with the GEO Community under the guidance of the IPWG and the Executive Committee during 2015.

From the 2017-2019 GWP onwards, the GEO Programme Board will be responsible for

- Guiding the GEO Secretariat in developing the GWP and ensuring that the knowledge and capacity of the GEO Community is used as appropriate; and
- Prioritizing the allocation of resources, aiming to ensure full implementation of GEO's Core Functions and optimally advancing the achievement of the GEO Strategic Objectives, while respecting the responsibilities of resource-providers.

The GWP is developed in three phases:

- An initiation phase to collect input from the GEO Community, the GEO Members and Participating Organizations, as well as interested third parties, including from the private sector;
- A consolidation phase to agree on the implementation actions among GEO Participating Organizations and Members and to identify the necessary resources; and
- An acceptance phase to formally accept the GWP and commit the necessary resources.

a. Initiation phase

The aim of the **initiation phase** is for the GEO Secretariat to propose a draft GWP that

- implements all GEO Core Functions and advances GEOs Strategic Objectives;
- responds to the needs and interests of GEO Members and Participating Organizations;
- recognizes and builds on the capacities available in the GEO Community.

During the **initiation phase** the GEO Secretariat engages with specific stakeholders such as UN Programmes, Foundations, Treaties or Conventions, the GEO Community at large, and GEO Plenary delegations. The engagement process could be carried out through dedicated discussions, workshops, or consultation processes. The GEO Community can bring forward new proposals or suggest

modifications to ongoing activities. (Note that GEO Community Activities can be added at any time). Input should also be provided by relevant advisory boards.

The initiation phase concludes with presentation of a draft GWP by the GEO Secretariat.

b. Consolidation phase

The aim of the **consolidation phase** is to align the GWP with GEO (Member and Participating Organizations) priorities and available resources.

During the consolidation phase the GEO Programme Board, supported by the GEO Secretariat, will discuss all GEO Foundational Tasks included in the draft GWP and actively help to make necessary resources available that will enable their implementation. Discussions with potential contributors and the stakeholders active in the activity's implementation will be held during this phase to adjust the activity's content until it can realistically be implemented with resources available.

Also, for GEO Flagships and GEO Initiatives, the GEO Programme Board will review progress with reference to their respective implementation plans and take action to help address any issues.

The consolidation phase concludes with a formal recommendation of the draft GWP for Plenary acceptance.

c. Acceptance phase

The aim of the **acceptance phase** is to achieve formal acceptance of the GWP and commitment of the resources made available by GEO Members.

During the acceptance phase the GEO Secretariat supports GEO delegations in preparing their commitments at Plenary through, for example, providing complementary material and reporting updates on expected resource commitments.