

## Proposal for the Foundational Tasks of the GEO Work Programme 2023-2025

*This document is submitted by the GEO Secretariat to the Programme Board for discussion.*

### 1 BACKGROUND

At the 25<sup>th</sup> Programme Board meeting, the GEO Secretariat presented a proposed Foundational Task structure composed of three major tasks: 1) GEO Work Programme Coordination; 2) Engagement Priorities Coordination and Integration; and 3) Data and Knowledge Management.

The proposed Foundational Tasks focus on the functions that will enable the GEO Work Programme to achieve the objectives of the 2023-25 GEO Work Programme, as established by the Programme Board. This includes an accelerated transition from research outputs to operational services, as well as a focused, user-centred and impact-driven GEO Work Programme that advances GEO as the go-to entity for global Earth observation-based solutions.

The Programme Board requested the Secretariat to map and provide the rationale for the components that were retained, removed and modified. The Board also requested to reflect the operational services provided by GEO Members.

This document reflects on the Programme Board guidance and proposes refined Foundational Tasks, components and implementing bodies.

### 2 CHANGES IN FOUNDATIONAL TASKS

The following points highlight the major elements of the 2023-25 GEO Work Programme's Foundational Tasks including:

- The GEO Work Programme Coordination task continues to focus on the support provided in building synergies between the GEO Work Programme activities. The task will also aim to provide tools that will help Flagships, Initiatives and Pilot Initiatives in building their success. In addition, this task will also include the post-2025 incubator approach, which will build a more integrative and better-resourced Work Programme for delivery and impact.
- A single task 'Data and Knowledge Management' is constructed to streamline the operation and evolution of the GEO infrastructure and its services, to fill data gaps, including in situ data, to integrate technical and legal guidance on data and knowledge management for GEO Work Programme, and eventually to provide the open data and open knowledge that fit the needs of both GEO Work Programme activities and the end-users.
- Recognizing the interrelated nature of Engagement Priorities, the task on Engagement Priorities will focus on supporting and connecting relevant global policy frameworks to a more integrated and operational GEO Work Programme.
- GEO Secretariat operations, communications and resource mobilization are removed from GEO Work Programme Foundational Tasks as they are cross-cutting functions of the Secretariat and not exclusively serving the GEO Work Programme.

The table below maps the changes in components of Foundations Tasks 2023-2025 vis a vis Foundational Tasks 2020-2022.

Legend:

	Remain unchanged
	Continue with slight changes
	New addition
	Merged to other components
	Move outside Foundational Tasks

Foundational Tasks 2020-2022	Foundational Tasks 2023-2025	Note
GEO Work Programme Support	GEO Work Programme Coordination	
Programme Board Support	Programme Board Support	
GEO Work Programme Development	GEO Work Programme Post-2025 Incubators	
GEO Work Programme Monitoring and Liaison	GEO Work Programme Progress and Impact Monitoring	Liaison is a cross-cutting effort. This component will strengthen the focus on monitoring of Work Programme results and impact
GEO Work Programme Capacity Development	Capacity Sharing for Uptake of GEO Work Programme Outputs and GEO Members' Operational Services	Addressing PB's comments: rewording 'capacity development' to 'capacity sharing'; providing visibility to GEO Members' operational services
	GEO Work Programme Toolkit Development	This new component will provide practical guidance to GWP activities to advance their implementation
	Advancing Equality, Diversity and Inclusiveness in GEO Work Programme	This new component will facilitate integration of EDI in the Work Programme activities
GEO Engagement Priorities Coordination	GEO Engagement Priorities Coordination and Integration	
GEO Engagement Priorities Coordination	Engagement of GEO Work Programme in Global Policy Frameworks	
Commercial Sector Engagement		GEOSEC Core Function supporting GEO Community, including GEO Work Programme with oversight by ExCom
Communications		GEOSEC Core Function supporting GEO Community, including GEO Work Programme with oversight by ExCom
Resource Mobilization		GEOSEC Core Function supporting GEO Community, including GEO Work Programme with oversight by ExCom

	<b>Integration across GEO Engagement Priorities</b>	This new component will facilitate integration across GEO Engagement Priorities
	<b>Promotion of Key Programmatic Directions in GEO Work Programme</b>	This new component will facilitate identification and development of key programmatic directions in the GEO Work Programme, including post-2025 incubators
	<b>Reinforcement of GEO Work Programme's Connections with National Policy</b>	This new component will facilitate building or strengthening connections between GEO Work Programme activities and national ministries
<b>GEOSS Data, Information and Knowledge Resources</b>	<b>Data and Knowledge Management</b>	
Satellite Observations	Satellite Data Access and Use Coordination	Focus shifting from observations to access and use
In situ Observations	In Situ Data Access and Use Coordination	Focus shifting from observations to access and use
Modelling	Modelling	
Advancing GEOSS Data Sharing and Data Management Principles	Advancing Data Sharing and Management	
<b>GEOSS Infrastructure Development</b>		This entire task is merged into 'Data and Knowledge Management'
<b>GEOSS Platform Operation</b>	<b>GEO Infrastructure Operation</b>	Merged to 'GEO Infrastructure Operation'
Support GEO Community Data and Information Needs		Functions distributed to 'Capacity Sharing for Uptake of GWP Outputs' 'Satellite Data Access and Use Coordination' 'In Situ Data Access and Use Coordination'
GEO Knowledge Hub Development		Merged to 'GEO Infrastructure Operation'
GEONETCast Operation		Merged to 'GEO Infrastructure Operation'
GEOSS Platform Documentation		Merged to 'GEO Infrastructure Operation'
<b>GEOSS Infrastructure Evolution</b>	<b>GEO Infrastructure Evolution</b>	
<b>GEO Secretariat Operations</b>		
Management of the GEO Trust Fund		GEOSEC Core Function supporting GEO Community, including GEO Work Programme with oversight by ExCom
Management of Secretariat Human Resources		GEOSEC Core Function supporting GEO Community, including GEO Work Programme with oversight by ExCom

Conference and Meeting Management		GEOSEC Core Function supporting GEO Community, including GEO Work Programme with oversight by ExCom
Relations with GEO Members, Participating Organizations and GEO Associates		GEOSEC Core Function supporting GEO Community, including GEO Work Programme with oversight by ExCom
Coordination of GEO Evaluations		Independent evaluations are conducted outside of the GEO Secretariat, although the Secretariat provides logistics and administrative support to the evaluators. The process is overseen by ExCom

### 3 FOUNDATIONAL TASKS, COMPONENTS AND IMPLEMENTATION

Following the 25<sup>th</sup> Programme Board meeting, there were four confirmed or proposed developments that will impact on the implementation of Foundational Tasks.

The first is the revised GEO Secretariat Concept of Operations 2023-2025, approved at the 60<sup>th</sup> Executive Committee meeting. This will result in the restructuring of the Secretariat and further strengthen the GEO Work Programme Team. The changes include the integration of Engagement Priority Coordinators and the addition of a Data and Knowledge Team Lead. These changes in the GEO Work Programme Team align with the proposed Foundational Tasks and represent a much stronger commitment of the Secretariat’s resources to two of its most important stakeholders – the GEO Work Programme community and the Programme Board.

The second development is being proposed as a result of the Joint Working Groups Evaluation Survey. While Working Groups have been key implementing bodies of the Foundational Tasks, the survey revealed that most Work Programme activities have not used the Working Groups’ deliverables. In other words, the Working Groups did not serve a sufficient enabling function as they were designed to. This should be addressed in the future work of Working Groups. If the survey recommendations are approved by the Programme Board, the Capacity Development Working Group will evolve into a Community of Practice, while other Working Groups will add members from Work Programme activities and support the needs of the GEO Work Programme and the broader policy landscape within which they operate.

The third change is the forthcoming revival and re-structuring of the GEO Infrastructure Development Task Team (GIDTT). The GIDTT will oversee the development of new architecture with the inclusion of its various components. This will help to ensure that the GEO infrastructure integrates and serves the GEO Work Programme community in an integral manner.

Lastly, the Post-2025 Working Group has been advancing the draft of the Post-2025 Strategy. According to the latest draft, GEO will create a Work Programme portfolio of activities that enables transformational change. The Foundational Tasks will need to enable the GEO Work Programme advance towards the vision and mission of the post-2025 GEO. The current draft of the Strategy calls upon the Work Programme activities to focus on tools for supporting environmental and/or societal policy decisions; empower and support policy coherence; integrate social sciences with Earth observations; focus on transdisciplinary co-design, and lead to social innovation and economic growth.

Pending approval of these changes, the three Foundational Tasks, including their Expected Outcomes, Components and Implementing Bodies are refined as below.

#### 4 GEO WORK PROGRAMME COORDINATION

The first Foundational Task coordinates the development, implementation and monitoring of the GEO Work Programme under the oversight of the Programme Board. It also provides the operational capacity to advise the GEO Programme Board and to implement their decisions and recommendations. To realize its enabling functions, this task will need to support the GEO Work Programme in developing large-scale integrated activities that are based on additionality, efficiency, effectiveness, and impact. The task will also develop tools, methodologies and indicators for conducting analysis to support the GEO Work Programme community and the Programme Board.

##### Expected Outcomes

- GEO Programme Board has access to information, advice and other support required to fulfil its functions and duties.
- Decisions by GEO Members and GEO governing bodies are informed by analyses and reports based on regular collection of data and information about the GEO Work Programme activities.
- Leads and participants of GEO Work Programme activities have the information, tools and support required to effectively implement their respective activities.

##### Components

- **Programme Board Support:** Preparation of Programme Board meeting agendas and documents, in consultation with the Programme Board co-chairs. Preparation of Programme Board reports to other GEO governance bodies. Providing logistics support to Programme Board meetings. Supporting the organization of the GEO Symposium.
- **GEO Work Programme Support Toolkit Development:** Development of toolkits that support implementation of the GEO Work Programme activities, including capacity development, communications, knowledge management, monitoring and evaluation, resource mobilization, etc.
- **GEO Work Programme Post-2025 Incubators Development:** Experimenting models of the next generation Flagships and Initiatives that can provide trusted and sustained Earth observation-based operational services to multiple environmental agreements.
- **GEO Work Programme Progress and Impact Monitoring:** Development of indicators that measure the success of the GEO Work Programme and the maintenance of databases for GEO Work Programme monitoring. Analysis of monitoring data and preparation of reports on the progress and impact of the GEO Work Programme.
- **Advancing Equality, Diversity and Inclusiveness in the GEO Work Programme:** Leveraging the network of the Youth Community of Practices and the GEO Indigenous Alliance to increase the active participation of youth, indigenous people and other under-represented groups in the GEO Work Programme.
- **Capacity Sharing for the Uptake of GEO Work Programme Outputs and GEO Members' Operational Services:** Understanding the local and national needs of GEO Member countries to allow for partnership between the GEO Work Programme activities

and countries in co-designing products and services. Facilitating the wider use of GEO Members' existing operational services by other countries in need.

### Implementing Bodies

- GEO Secretariat
- Programme Board/Engagement Teams
- Capacity Development Working Group/Community of Practice (Pending approval by the Programme Board)
- Equality, Diversity and Inclusiveness Subgroup
- Youth Community of Practice

## 5 ENGAGEMENT PRIORITY COORDINATION AND INTEGRATION

The second Foundational Task aims at furthering the engagement of GEO Work Programme with UN agencies and other international organizations responsible for global policy frameworks. More specifically on GEO's Engagement Priorities: the UN 2030 Agenda on Sustainable Development; the Paris Agreement on Climate Change, the Sendai Framework on Disaster Risk Reduction, and the New Urban Agenda. With increased policy relevance, the Work Programme is oriented towards integration along the Earth observations value chain as well as impact. To realize its enabling functions, this task will provide support, guidance and tools for the GEO Work Programme activities to understand, engage in, and respond to global, regional and national policy needs.

### Expected Outcomes

The implementation of a consistent and coordinated approach for engaging UN agencies and other international policy organizations relevant to the GEO Engagement Priorities, across the GEO community. The development of an integrated, demand-driven, policy-relevant GEO Work Programme. Strengthened policy connections in the GEO community and beyond.

### Components:

- **Engagement of GEO Work Programme in Global Policy Frameworks:** Furthering GEO Work Programme activities' engagement with UN agencies and other international organizations to better align GEO's work with relevant global policy frameworks and contribute to their implementation with Earth observation-based solutions.
- **Integration across GEO Engagement Priorities:** Identifying issues relating to multiple GEO Engagement Priorities (Climate Action, Disaster Risk Reduction, Urban Resilience and Human Settlements, and Sustainable Development) and facilitating integration across these priorities.
- **Promotion of Key Programmatic Directions in GEO Work Programme:** Supporting the identification and development of key programmatic directions in the GEO Work Programme in line with the objectives of relevant global policy frameworks as well as assessed countries' needs and priority interests, including through the Post-2025 incubators.
- **Reinforcement of GEO Work Programme's Connections with National Policy:** Building or strengthening connections between GEO Work Programme activities and national ministries in GEO Member countries to support advocacy in global policy fora

and to enable national-level policy development and implementation of Earth observation-based solutions.

### Implementing Bodies

- GEO Secretariat
- Climate Change Working Group
- Disaster Risk Reduction Working Group
- Resilient Cities and Human Settlements Working Group

## 6 DATA AND KNOWLEDGE MANAGEMENT

The third Foundational Task aims to fill the data gaps (both satellite and in situ) of GEO Work Programme activities, publish knowledge packages produced by GEO Work Programme activities, and maintain/evolve the infrastructure that enables these purposes.

### Expected Outcomes

- Increased number of free and open Earth observations datasets, in adherence with the GEO Data Sharing Principles and Data Management Principles.
- Increased number of knowledge packages developed by (or made available to) GEO Flagships, Initiatives and Pilot Initiatives.
- Lower barriers for uptake of Earth observations and open-source technology to produce applications for environmental monitoring.
- Documented user expectations and requirements regarding GEO Infrastructure.

### Components

- **Satellite Data Access and Use Coordination:** Promoting uptake of satellite observations into space agency repositories, data aggregators and cloud storage for use in analyses and global policy reporting, linking it closely with the GEO Knowledge Hub. Advocating production of integrated multi-satellite Analysis Ready Datasets. Facilitate availability of multi-user licences for high-resolution satellite imagery.
- **In Situ Data Access and Use Coordination:** Improving access to in situ data and provide coordination and repository services where needed. Advocating new data collection systems and encourage integration of user requirements with respect to in situ data, which will be closely linked with the GEO Knowledge Hub.
- **Advancing Data Sharing and Management:** Continuing the promotion of free, full, open, and timely access to Earth observation datasets, products and services. Maintaining dialogue with governments and support the uptake and implementation of the GEO Data Sharing and Data Management Principles by GEO Members and Participating Organizations, and raising awareness of the technical, organizational, and resource implications of their implementation.
- **GEO Infrastructure Operation:** Integrating the operation of the GEOSS Platform and the GEO Knowledge Hub as complementary components of the GEO Infrastructure. Continuing establishment of interoperability with data providers (especially in situ) and Data Cubes. Continuing the implementation of the GEO Knowledge Hub as a digital repository for the GEO Work Programme activities to contribute curated, authoritative,

validated and reproducible content for evidence-based reporting on policy commitments and decision-making.

- **Modelling:** Supporting algorithm and model development, and advocating integration of information from in situ, airborne and space-based observations through data assimilation and models. Facilitating access to model data (e.g. initialization, boundary conditions, reanalyses, output) and increasing sharing of the modelling and analysis methods needed to transform data into useful products, especially for developing countries.
- **GEO Infrastructure Evolution:** Advancing the evolution of the GEO infrastructure based on analysis of the evolving landscape of information technology, changing patterns of production and use of Earth observation products and services, and the specific user requirements expressed by GEO Flagships, Initiatives and Pilot Initiatives. The GEO Infrastructure evolution implies the integration of the current GEOSS Platform and the GEO Knowledge Hub into a single and coordinated platform.

### Implementing Bodies

- GEO Secretariat
- Committee on Earth Observation Satellites
- Data Working Group
- GEO Infrastructure Development Task Team (Pending approval by the Executive Committee)

## 7 NEXT STEPS AND TIMELINE

- 15-16 June 2023 (26<sup>th</sup> PB): Programme Board consultation on a detailed description of the Foundational Tasks and implementing models.
- Mid-June to mid-July: GEO Work Programme consultation on Foundational Tasks
- Mid-June to mid-August: Revision/Development of ToRs of Working Groups and Community of Practices
- July 2023: ExCom consultation on Foundational Tasks
- September 2023 (27<sup>th</sup> PB): Programme Board approval of the Foundational Tasks
- 6-10 November (GEO-19 Plenary): Plenary endorsement of Foundational Tasks of the GEO Work Programme 2023-2025