

Proposed Strategy for Engagement with GEO Work Programme Activities

This document is submitted by the Secretariat to the Programme Board for decision.

1 INTRODUCTION

The approval of the 2020-2022 GEO Work Programme (GWP) by the GEO-XVI Plenary marked the end of the development phase and the start of the implementation phase of this GWP.

At its 15th meeting in September 2019, the Programme Board (PB) expressed a desire to continue the engagement with the GWP activities that had been started during the review of the implementation plans, which could include the continuation of the review teams in some form.

This document proposes a strategy for how the engagement of GWP activities by the PB and the Secretariat might be structured and coordinated.

2 CONTEXT

There are several factors which influence the design of the strategy. These include the following:

- The Secretariat heard from GWP activity leads, such as through the development of the status report on the Flagships and Initiatives, that many would prefer a closer relationship with the Secretariat and the PB and may also seek various kinds of assistance to help them advance their activities.
- PB members have sought a more detailed understanding of the status of implementation of GWP activities, however, responses from the activities to monitoring requests have resulted in a low (about 50%) response rate and many gaps. Interactive approaches, such as in the exercise in late 2018 / early 2019 provide a richer information base (though qualitative) and are potentially open to inclusion of PB members.
- GWP activity leads almost universally appreciated the opportunity to have direct contact with PB members and were responsive to the recommendations of the review teams. The review teams have now established a level of understanding of the activities that they reviewed that would also be useful to retain and build upon. The review team members can then also act as advocates and interlocutors between PB and the GWP activities and between one activity and another (as in the case of the Urban Resilience Task Force in the response to the comments from UN-Habitat).
- Issues identified in the course of the implementation plan reviews were not fully resolved in all cases. Some of the issues reflect challenges, such as lack of resources or a need for a shift in strategy, that could not be addressed in the course of the few months of the GWP development process. There are thus many issues that will require follow-up, and possible PB and/or Secretariat intervention, during the next several years.

3 OUTLINE OF THE STRATEGY

3.1 Concept

The central idea of the strategy is to identify, for each GWP activity, a small set of objectives that would form the basis for engagement of the activities by the PB and the Secretariat. It is planned that the objectives will be agreed jointly between the PB, the Secretariat and the activities through a process of consultation. Once agreed, responsibilities for actions would be assigned to particular individuals, which could include Secretariat staff, GWP leads or participants, or PB members. A schedule of contact would also be prepared, identifying timing of teleconferences with each activity, which would include PB members in the case of the GEO Flagships, Initiatives and Regional GEOs. Progress in addressing the objectives would also form one of the sources for monitoring and reporting on the GWP.

The objectives which would form the core of the strategy could take several different forms, including:

- Addressing major weaknesses or gaps identified in the implementation plan reviews;
- Providing assistance to the GWP activity on such matters as resource mobilization, communications, etc.;
- Facilitating connections with policy contacts, experts, user communities, etc.;
- Strengthening linkages to engagement priorities or with other GWP activities; or
- Assisting in the sharing of data, services, tools, methods, etc. with the broader community, including via the GEO Knowledge Hub, the GEOSS Platform, or other ways.

It is essential that the objectives be specific, concrete and achievable within the period of the 2020-2022 GWP. However, they should also be significant to the activity and to furthering the work of GEO and not be merely administrative (such as missing parts of the implementation plan, which could be addressed separately).

A second key element of the strategy is that the review teams which undertook the review of the implementation plans of GEO Flagships, Initiatives and Regional GEOs would be re-configured as “Engagement Teams”. This responds directly to the request made by PB members at the 15th meeting. Each Engagement Team would become the main point of contact between a set of GWP activities and the PB, in addition to the ongoing role of the Secretariat. The intent is not to replace or duplicate the role of the Secretariat in supporting and monitoring the progress of the GWP activities, but to enhance it through the peer-to-peer relationships with PB members.

Engagement with Community Activities would remain with the Secretariat, except where Engagement Teams see benefit from including selected Communities Activities within their scope. Foundational Tasks will be expected to report directly to the PB as required.

3.2 Consultation on the Objectives

An illustrative, but as yet incomplete, set of engagement objectives is provided as Annex A to this document. An initial set of possible objectives was developed by the Secretariat based on the results of the reviews of the implementation plans, supplemented by additional information such as the results of previous assessments and direct dialogue with activity leads. The initial objectives were sent in December 2019 to the activity leads for consultation. In some cases these objectives were either confirmed or revised by the leads and this is noted in the table. In other instances, the Secretariat has not yet received a response from the activities and

this is also noted. For a minority of activities, no objectives have yet been defined and the Secretariat will work with the activity leads to develop a set of objectives together.

As part of the implementation of the strategy, it is expected that the PB and, in particular, the Engagement Teams, will also contribute in defining the objectives. This process will begin with the 16th PB meeting and is expected to extend for several months. From a Secretariat perspective, it would be desirable to have the objectives for all of the GWP activities confirmed in advance of the 2020 GEO Symposium.

4 IMPLEMENTING THE STRATEGY

4.1 Duties of the Engagement Teams

The required time commitment of PB members participating on the Engagement Teams should be less than that for the review teams. The main expectations, beyond the normal duties as a PB member, would be as follows:

- Participate in periodic teleconferences with GWP activity leads and the Secretariat. The aim would be to hold at least two teleconferences per year with the leads of each GWP activity. Given challenges of time zones and the need to accommodate the schedules of the GWP activity leads, it is assumed that not all engagement team members will be able to attend all of the calls.
- Participate in teleconferences of the Engagement Team, as needed. While it is difficult to predict the number of calls, it is not anticipated to have more than two or three per year per team.
- Review emailed documents related to the objectives identified for the activities covered by the team.
- Assist in furthering the objectives of the GWP activities as identified in the strategy, where the PB member has relevant expertise, contacts, etc.
- Assist in the preparation of status reports to PB meetings.

4.2 Number and Composition of the Engagement Teams

The teams set up to review the implementation plans of the GEO Flagships, Initiatives and Regional GEOs were as were as shown in Table 1 below.

Table 1 -- Activities Reviewed by Each Review Team

Team	Activities Reviewed – Community Activities shown in []	#
Atmosphere	GOS ₄ M, GOS ₄ POPS, GEO-VENER	3
Climate	GFOI, [SCO]	1
Cross-cutting	[CITSCI-EO], DIAS, EO ₄ SDG, [GEO-EV]	2
Disasters	GEO-DARMA, GSNL, GWIS	3
Ecosystems	GEOBON, [GEO-ECO], GEO-WETLANDS, EO ₄ EA	3
Geographic	[ATLANTIC-GEOS], GEO-CRADLE, GEO-GNOME	2
Land	GDIS, GEOGLAM, GEO-LDN	3
Regional	AFRIGEO, AMERIGEO, AOGEO, EUROGEO	4
Urban	EO ₄ HEALTH, GUOI, HUMAN-PLANET	3
Water	AQUAWATCH, BLUE-PLANET, GEOGLOWS	3

Due to some implementation plans that had been expected not being received, and to some activities not being approved as Initiatives, the number of Flagships and Initiatives per team varies. There is thus some room to revise the teams to make the number of activities per team more aligned.

The proposed revised set of Engagement Teams is shown below:

Table 2 – Proposed Activities Assigned to Engagement Teams

Team	Activities Reviewed – Changes shown in red	#
Atmosphere	GOS ₄ M, GOS ₄ POPS, GEO-VENER	3
Cross-cutting	DIAS, EO ₄ SDG, GEO-CRADLE , GEO-GNOME	4
Disasters	GEO-DARMA, GSNL, GWIS	3
Ecosystems	GEOBON, GEO-WETLANDS, EO ₄ EA, GFOI	4
Land	GDIS, GEOGLAM, GEO-LDN	3
Regional	AFRIGEO, AMERIGEO, AOGEO, EUROGEO	4
Urban	EO ₄ HEALTH, GUOI, HUMAN-PLANET	3
Water	AQUAWATCH, BLUE-PLANET, GEOGLOWS	3

Based on the previous membership of the review teams, the members of the Engagement Teams are proposed below, with adjustments to reflect the removal of two teams. PB members who are co-leads of activities have been removed from the applicable teams. The proposal is to retain, to the extent possible, the knowledge developed through the review team process.

Table 3 – Proposed Members of Engagement Teams

Team	Proposed Members – Chair shown in bold ; Changes shown in red	#
Atmosphere	Bourassa (Canada); Fontaine (ESIP); Gerasopoulos (Greece); Gu (China); Ochiai (Japan) ; Rayder (US)	6
Cross-cutting	Anand (GODAN); Bourassa (Canada); Gevorgyan (US); Gross (IAG); Khalsa (IEEE); Petiteville (ESA); Ranchin (France) ; Sideris (IUGG)	8
Disasters	Adler (MRI) ; Antwiwaa (Ghana); Bye (Norway); Craddock (IAG); Marsh (UK); Sideris (IUGG); Wilson (SWF)	7
Ecosystems	Milne (GRSS); Muraoka (Japan); Nativi (EC); Pettorelli (UK); Ross (Australia); Vihervaara (Finland)	6
Land	Adler (MRI); Antwiwaa (Ghana); Fontaine (ESIP); Gevorgyan (US); Mlisa (SA); Pettorelli (UK)	6
Regional	Anttila (Finland); Craglia (EC); Dettmann (Germany); Ochiai (Japan); Pirrone (Italy); Zampati (GODAN); Zhou (China)	7
Urban	DeLoatch (US); Gerasopoulos (Greece); Petiteville (ESA) ; Pirrone (Italy); Seeyave (POGO); Wilson (SWF); Zhou (China);	6
Water	Bye (Norway); Halpern (COSPAR); Kabo-Bah (Ghana); Khalsa (IEEE); Mlisa (SA); Nativi (EC); Ross (Australia)	6

The membership of the Engagement Teams may be revised, either by adding new members or by existing members who prefer to join other teams or who may need to reduce their time commitment in 2020.

5 RECOMMENDATIONS

The Secretariat recommends that the Programme Board:

- Approve the proposed strategy as the general approach to be used for organizing engagement with GWP activities during implementation of the 2020-2022 GWP;
- Approve the creation of Engagement Teams, with the duties as proposed in section 4.1;
- Approve the set of Engagement Teams and their assigned GEO Flagship and Initiative responsibilities, as proposed in Table 2; and
- Provide feedback on the set of objectives, as input to further discussions with the GWP activity leads.

Individual PB members are asked to indicate their willingness to participate on an Engagement Team and to specify on which team or teams they wish to be involved.

ANNEX A

DRAFT OBJECTIVES FOR ENGAGEMENT OF GEO WORK PROGRAMME ACTIVITIES

Green shading = objectives agreed by activity leads

Yellow shading = objectives sent to activity leads for consultation

Blank = objectives in development

Short Name	Full Name	Priority Objectives
GEO-BON	GEO Biodiversity Observation Network	<ul style="list-style-type: none"> - Sustainable funding of the GEO BON Secretariat - Pilot demonstration of cloud computing services for EBVs
GEOGLAM	GEO Global Agricultural Monitoring	<ul style="list-style-type: none"> - Funding obtained from G20 GEO Members to support sustainability of GEOGLAM services. - Progress on use of the GEO Knowledge Hub and technical services (e.g. Sen2Agri on AWS) to support analytical processes. - Completion of 3 white papers describing GEOGLAM linkages to the GEO engagement priorities. - GEOGLAM communications strategy harmonized with GEO communications.
GFOI	Global Forest Observation Initiative	<ul style="list-style-type: none"> - Confirmation of a policy mandate. - Inclusion of GFOI results in the GEO Knowledge Hub. - GFOI's connections strengthened to other land-based GEO activities, including GEOGLAM, GEOBON and potentially others. - GFOI's participation in the GEO Climate Change and Capacity Building working groups. - Shared communications activities with GEO furthered - GFOI's membership from other GEO partners working on forest monitoring and associated GHG accounting issues.
GOS4M	Global Observation System for Mercury	<ul style="list-style-type: none"> - Confirmation of a policy mandate. - Consolidation of partnerships and data sharing

Short Name	Full Name	Priority Objectives
AQUAWATCH	Aquawatch	Continue to construct the 'Water Quality Information Service' by: <ul style="list-style-type: none"> - Cataloguing a Library of Algorithms for inclusion in GEO Knowledge Hub - Collaborate with CEOS on the development of an Aquatic Analysis Ready Data (ARD) product through community consensus - Advance the development of a global validation network - Develop end-to-end demonstration projects
BLUE-PLANET	Oceans and Society: Blue Planet	
DIAS	Data Integration and Analysis System	<ul style="list-style-type: none"> - Linkage to GEO work with UNDRR / Sendai Framework - Increased visibility and service coverage at the global level
EO ₄ EA	Earth Observations for Ecosystem Accounting	<ul style="list-style-type: none"> - Policy mandate from UNSD-SEEA. - Tools, guidelines, etc. included in GEO Knowledge Hub (if suitable)
EO ₄ HEALTH	Earth Observations for Health	<ul style="list-style-type: none"> - Funding for EO₄Health Secretariat - Engagement of public health agencies [specific countries?]
EO ₄ SDG	Earth Observations in Service of the 2030 Agenda for Sustainable Development	<ul style="list-style-type: none"> - Clarification of 'federated approach' on SDGs and role of EO₄SDG in relation to other GEO entities. - Clarification of the process for vetting proposed methods developed in GEO to support the SDGs.
GDIS	Global Drought Information System	<ul style="list-style-type: none"> - Clarification of the governance structure. - Clarification of the planned deliverables for 2020-2022, taking account of available resources.
GEO-CRADLE	GEO Capacity Building in the North Africa, Middle East, Balkans and Black Sea Region	<ul style="list-style-type: none"> - Confirmation of funding post-2020. - Strategy for engagement of policy decision makers and other targeted users. - Clarification of planned services.

Short Name	Full Name	Priority Objectives
GEO-DARMA	Data Access for Risk Management	<ul style="list-style-type: none"> - Resolution of the issues causing delays in the 2017-2019 period. - Strategy for funding projects beyond the pilot phase (sustainability). - Strategy for how the lessons from the pilots can be replicated and scaled by countries.
GEOGLOWS	GEO Global Water Sustainability	<ul style="list-style-type: none"> - Increased coordination with other streamflow and flood activities. - Results included in the GEO Knowledge Hub.
GEO-GNOME	GEO Global Network for Observation and Information in Mountain Environments	
GEO-LDN	GEO Land Degradation Neutrality Initiative	
GEO-VENER	GEO Vision for Energy	<ul style="list-style-type: none"> - Support the achievement of targets under SDG 7 - Connections with energy sectors in key GEO Member countries. - Link GEO VENER activities with the Climate Working Group and increase their visibility within GEO's climate portfolio.
GEO-WETLANDS	GEO Wetlands Initiative	
GOS4POPS	Global Observation System for Persistent Organic Pollutants	
GSNL	GEO Geohazard Supersites and Natural Laboratories	<ul style="list-style-type: none"> - Implementation of supersites in additional countries [specify?] - Funding support for supersites in developing countries. - Link established with the DRR Working Group.
GUOI	Global Urban Observation and Information	<ul style="list-style-type: none"> - Coordinated response to UN-Habitat with other urban-related GWP activities. - Identification of targeted services to be developed.
GWIS	Global Wildfire Information System	

Short Name	Full Name	Priority Objectives
HUMAN-PLANET	GEO Human Planet Initiative: Spatial Modeling of Impact, Exposure and Access to Resources	<ul style="list-style-type: none"> - Coordinated response to UN-Habitat with other urban-related GWP activities. - Results included in the GEO Knowledge Hub.
AFRIGEO	Africa Group on Earth Observations	
AMERIGEO	Americas Group on Earth Observations	
AOGEO	Asia-Oceania Group on Earth Observations	
EUROGEO	European Group on Earth Observations	
ACIS	Advancing Communications Networks	<ul style="list-style-type: none"> - Stronger linkages to the GEOSS Infrastructure Development FT.
AFRICULTURES	Enhancing Food Security in African Agricultural Systems with the support of Remote Sensing	<ul style="list-style-type: none"> - More detailed implementation plan, including intended services and users.
ARCTIC-GEOSS	Arctic GEOSS	<ul style="list-style-type: none"> - Revised implementation plan reflecting H2020 funding decisions.
ATLANTIC-EO	Earth Observations in the Atlantic Region	<ul style="list-style-type: none"> - Active collaboration with BLUE-PLANET and GEO-BON (MBON). - Confirmation of funding post-2020.
C3S	Copernicus Climate Change Service	<ul style="list-style-type: none"> - Transition to a collaborative project with other GEO Members / POs.
CAMS	Copernicus Atmospheric Monitoring Service	<ul style="list-style-type: none"> - Transition to a collaborative project with other GEO Members / POs.

Short Name	Full Name	Priority Objectives
CLIMATE-DATA	Climate Observations, Simulation and Impacts	- Link to other GWP activities on climate.
CROP-PEST-MONITORING	Global Crop Pest and Disease Habitat Monitoring & Risk Forecasting	- Publication of key results and products in English.
CSDR	Construction and Services of Chinese High-resolution Satellite Data Resources	- Greater open access to satellite images.
DE-AFRICA	Digital Earth Africa	- Staffing of the DE Africa office. - Completion of a detailed implementation plan. -
DELTA&ESTUARY	Global Observation on Deltas and Estuaries	- Transition toward an open science approach.
EO&CITIZEN-SCIENCE	Earth Observations and Citizen Science	- Completion of planned deliverables offering guidance to the GEO community on the use of citizen science.
EO ₄ DRM	Earth Observations for Disaster Risk Management	- Strategy for broader dissemination and transfer of results.
EO ₄ MIN	Earth Observations for Managing Mineral Resources	- Progress in obtaining funding.
EO ₄ SENDAI-MONITORING	Earth Observation and Copernicus in Support of Sendai Monitoring	- Expanded set of participants with greater geographic coverage in the activity. - A user guide on how to integrate EO in the monitoring for the Sendai Framework. - Development of a (processing / analytics) pilot tool that showcases how to use EO to derive a specific Sendai indicator.
EO ₄ WEF	Earth Observations for the Water-Energy-Food Nexus	- Expanded set of participants in the activity, e.g. NSO, IIASA.

Short Name	Full Name	Priority Objectives
EO-IIP	Earth Observation Industrial Innovation Platform	- Clarification of planned projects and/or services and their implementation timelines.
GEOARC	Global Ecosystems and Environment Observation Analysis Research Cooperation	- Transition toward an open science approach.
GEODESY ₄ SENDAI	Geodesy for the Sendai Framework	- Ministerial-level political support and funding for GNSS-enhanced tsunami early warning systems in the Circum-Pacific Belt (Pacific Ring of Fire) and Caribbean basin - Ministerial-level political support and funding for geodetic capacity building for disaster risk reduction and resilience
GEO-ECO	GEO Global Ecosystem Initiative	- Area of focus for the activity defined, with special emphasis on biotic/abiotic interactions in ecosystems, cross-scale dynamics and biogeographical aspects. - Implementation plan revised to provide more detail on activities and deliverables, including links with SDGs and possible funding sources. - Make full use of the legacy knowledge provided by ECOPOTENTIAL and other projects to support the international GEO Ecosystem Community of Practice. - Define links with international infrastructures such as ILTER, eLTER, LifeWatch ERIC, CZEN and others.
GEO-EV	GEO Essential Variables	- Shift to a more neutral stance regarding the application of the EV concept. - Funding sources post-2020 identified. - Practical early deliverable providing overview of EV activities in the GWP.
GLOBAL-AGRIDROUGHT	Global Agricultural Drought Monitoring	- Addition of participants in other regions.
GLOBAL-FLOOD-RISK	Global Flood Risk Monitoring	- Collaboration with other GWP water-related activities.
GLOBAL-LAND-COVER	Global Land Cover	- Intercomparison of LC and LCC products openly available.

Short Name	Full Name	Priority Objectives
GLOFAS	Global Flood Awareness System	<ul style="list-style-type: none"> - Collaboration with other GWP water-related activities. - Global-scale, comparable, and basin-wide hydrological information provided to international organizations
IN-SITU-ESC	In-Situ Observations and Applications for Typical Ecosystem Status of China and Central-Asia	- Collaboration with GEO BON.
MUSYQ	Multi-Source Synergized Remote Sensing Products and Services	
NEXT-EOS	Next Generation Earth Observation Services	
NIGHT-LIGHT	Night-time Light Remote Sensing for Global Sustainability	<ul style="list-style-type: none"> - Collaboration with GUOI and HUMAN-PLANET. - Identification of opportunities for support to UN-Habitat.
SCO	Space Climate Observatory	- Completion of a detailed plan in alignment with the overall GEO efforts in Climate Resilience
SPACE&SECURITY	Space and Security	- Initial pilot project identified, defined and commenced.
TIGGE	Thorpex Interactive Grand Global Ensemble Evolution into a Global Interactive Forecast System	- Link to other GWP activities, where relevant.
GEO-VALUE	Understanding the Impacts and Value of Earth Observations	- Improved access to reports and other GEO-VALUE results.