

## Concept Note for a Climate Foundational Task

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

### 1 INTRODUCTION

This note has been prepared by the Programme Board Paris Agreement subgroup (hereafter PASG), based on its activities from late 2017 through early 2019, in consideration of the development of a Climate Foundational Task. While the PASG recognizes that a new structure for the Foundational Tasks is currently under discussion, PASG recommends that the functions as described in this document are necessary in the GEO Work Programme.

### 2 BACKGROUND

Coordinated and concerted observations of climate change and its influences and impacts on ecosystem services, as well as on greenhouse gases and carbon cycle, are recognized to be crucial role of Earth observation communities in producing knowledge for sustainable development of the global society. In the *GEO Strategic Plan 2016-2025: Implementing GEOSS*, climate is clearly identified as the cross-cutting issue of the eight ‘application-oriented’ Societal Benefit Areas (SBAs) as well as in the three GEO engagement priorities, namely, the Sustainable Development Goals (SDGs), Sendai Framework of Disaster Risk Reduction, and Paris Climate Agreement. Since the early stage of development and implementation of 2017-2019 GEO Work Programme, Programme Board heard voices from many communities of practice and the GEO community that there should be coordination mechanisms to enhance the cooperation among GEO Work Programme activities and to reach out to the Earth Observation community, stakeholders and decision-making processes at large. To initiate these activities, the PASG was launched in 2017 by the aid of GEO Secretariat.

Last year, the PASG organized a [session in the 2018 GEO Symposium](#) (June, Geneva), a [GEO Climate Workshop](#) (June, Geneva), and a [dedicated session in the GEO-XV Plenary](#) (October-November, Kyoto) to communicate with GEO community and stakeholders on climate-related observations. Also, a dedicated mapping exercise of current GEO Work Programme activities with respect to elements of the Paris Agreement (led by Andre Obregon, GEO Secretariat, in early 2018) was fed into GEO Climate Workshop 2018. From these activities, the PASG was able to address:

1. Programmatic, thematic, and domain gaps between climate, its impacts and observations;
2. Opportunities for GEO to progress and deliver its observation data and knowledge; and
3. The needs for coordination mechanisms to connect the activities within GEO community and with the stakeholders outside GEO.

Based on these outcomes from the activities in 2018, the PASG is considering a need to establish a dedicated **Foundational Task** in the 2020-2022 GEO Work Programme to address these challenges in climate-related activities by cooperating with GEO community. Alternatively, considering the proposal by GEO Secretariat to integrate the Foundational Tasks into five groups of functions (proposed at 12<sup>th</sup> Programme Board meeting, February 2019), a **Working Group** could be developed to support the activities involved in the proposed composition in the new structure of Foundational Tasks.

### 3 OBJECTIVES AND ACTIVITIES

Regardless of whether this is a dedicated Foundational Task or a Working Group within the new Foundational Task structure, the main objectives of the activity remain the same, these being:

**Provide a coordination platform for climate-related activities in GEO Work Programme.** These activities include observation domains (atmosphere, ocean and terrestrial) and themes (climate and weather, trace gases, ecosystems, health, etc.).

**Ensure internal communication of GEO.** This activity may include to aiming at identifying what would be the best coordination option(s) to find synergies of observations, data sharing and applications. Activities may be taken through dialogue at GEO Symposium, Climate Workshop. A survey based on the mapping exercise conducted in 2018 and the presentations/outcomes of GEO Symposium 2018, Climate Workshop 2018, and GEO-XV Plenary could be planned.

**Support science/ policy communication.** This includes clarification what GEO can provide to the IPCC, UNFCCC COP, SBSTA, and other international bodies; identify needs, gaps and support and access to data; sustain observations; seek integrated approach with SDGs, Sendai Framework and other Conventions.

**Support communication** (exchange) between GEO Work Programme activities (Flagships, Initiatives, Community Activities) as well as with the user organizations, to address gaps and challenges to achieve shared objectives.

**Data provision beyond met/climate domain.** This could include terrestrial and oceanic areas (e.g., biogeochemistry, biology/ecosystems, permafrost and glaciers, sea-ice, river discharge, fire, etc....), by referring to observation guidelines such as Essential Climate Variables and GCOS Climate Monitoring Principles.

**High resolution data/local data** to support adaptation, additional requirements (cf., GCOS guidelines on climate-quality data).

**Data themes and impact indicators:** Climate impact measurements (e.g., land and ocean ecosystems, crop and fisheries yield, global biomass, health, food security,); Products for exposure and vulnerability

**Coordination for concerted observations** related to climate and its change

Data sharing (GEOSS Data Portal <http://www.geoportal.org>)

**Improve accessibility to in-situ data and observation communities/networks** of climate, ecosystems, etc. Particularly terrestrial domain related to biological processes.

**Connecting the different scales of activities** – from local, national, regional to global.

#### Outreach

**Promote to key stakeholders and partners** (UNFCCC, GCOS, Decision makers, etc.) the value of EO and information provided by GEO. (For example: GEO-GNOME Climate Atlas. Identify uptake of EO data in IPCC climate impact assessments, e.g., upcoming AR6 and Special Reports on ocean and cryosphere SROCC, land SRCLL, and recent Special Report on Global warming of 1.5degC)

### 4 EXPECTED OUTCOMES

Some potential outputs from the Foundational Task or Working Group could include:

- Case studies/pilots showcasing cross-cutting GEO capability in addressing climate issues and impacts, particularly addressing the needs of the Paris Agreement;

- Supplementary NAP guidance on Earth observations. ( Some countries have already formulated NAPs. A review of Emerging Practices in Monitoring and Evaluation for NAPs has been produced by [OECD](#).)
- Recommendations on how Earth observations data could be used to integrate in the NAPs approaches to implement/ achieve the Paris Agreement (Articles/ Key pillars on adaptation, mitigation, loss & damages, capacity building...), SDGs (targets/indicators), and Sendai Framework.