

CGMS FUTURE DIRECTION 2022+ TASK TEAM – TERMS OF REFERENCE

*Endorsed on 10 October 2022 on the occasion of the CGMS future direction 2022+ project
Task Team kick-off meeting*

1 INTRODUCTION

CGMS-50 plenary (15-17 June 2022) endorsed the proposal by the CGMS Secretariat for considerations for the future direction of CGMS (Ref. [CGMS-50-CGMS-WP-20](#) and [CGMS-50-CGMS-WP-38](#)) in view of the changing environment and in order to take stock of the current and future CGMS activities.

Overall there was

- consistent support for a review of the strategic direction;
- interest in implications of new opportunities and challenges for the CGMS community;
- a need for reprioritisation and focussing of activities;
- a need to review interfaces with other bodies and activities;
- a need that the refocussing shall be strategic rather than entirely bottom up; and
- a need to establish the review focus.

To perform a strategic review of CGMS activities and processes and ensure that CGMS continues to best serve its members and users, in a rapidly changing environment.

This activity is needed to:

- Take into account the impact of the changing environment and user requirements, and the need for CGMS to remain user-driven and operational;
- Take into account changes in CGMS leadership;
- Set the priorities for the next 10 years and beyond; and
- Regularly assure CGMS activities address issues of importance to space agencies and users in the long term.

2 TERMS OF REFERENCE

The CGMS task team for the future direction of CGMS 2022+ has the following objectives:

1. Based on inputs from CGMS members, propose a set of strategic topics to be addressed by CGMS in the next 10 years (Note: an initial tentative list based on the inputs from CGMS members collected prior to and post CGMS-50 can be found in the annex to this document);
2. Among these priorities, assess those which are new and propose mechanisms through which they can be addressed by CGMS;
3. Assess the adequacy of existing CGMS working processes to address these priorities, including interactions with other organisations;
 - a. Function and priorities of CGMS working groups;
 - b. How the working groups fit into CGMS and also how the CGMS working group outcomes are/should be used by agencies;

- c. Sustained interactions and definition of high-level scientific requirements with the International Science Working Groups;
 - d. Improve the definition and work of task teams, both at plenary and working group level; and
 - e. Review the scope and role of good/best practices, in particular for new satellite systems;
4. Assess interfaces with other international groups (CEOS and GEO in particular) to optimise synergies and avoid duplications;
5. Propose necessary modifications to the CGMS working structures;
6. Propose changes to scope and structure of CGMS key documents, in particular, the:
 - a. CGMS Charter
 - b. CGMS Baseline
 - c. CGMS High-Level Priority Plan;
7. Propose a CGMS Mission Statement.

DURATION AND LOCATION

Duration: 1 year, July 2022 – June 2023

Location: Virtual meetings, two in-person meetings prior to CGMS-51 plenary.

TASK TEAM COMPOSITION

For efficiency reasons, the size of the Task Team is kept small. IOC-UNESCO will coordinate its input through the WMO representative. The Task Team will be supported by the CGMS Secretariat (Mikael Rattenborg, Anne Taube, Paul Counet, Robert Husband). Mr. Kotaro Bessho, JMA, is the Chairperson of the Task Team.

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SCHEDULE

Dates	Activity
10 Oct 2022	1 st Task Team kick-off meeting (webex)
9 Nov 2022	2 nd Task Team meeting (webex)
21 Nov 2022	1 st High level meeting
15 Dec 2022	3 rd Task Team meeting (webex)
12 Jan 2023	4 th Task Team meeting (webex)
8 Feb 2023	5 th Task Team meeting (webex)
21-23 Feb 2023	5 th CGMS risk assessment workshop (agenda item on TT activities to be included)
15-16 Mar 2023	6 th Task Team meeting (in-person, EUMETSAT)
29 Mar 2023	2 nd high level meeting (webex)
24-28 Apr 2023	CGMS-51 WGIII meeting in EUMETSAT (in-person. If virtual 17-18 May). TT future direction project to be included on the agenda
8 May 2023	7 th Task Team meeting (webex)
14 Jun 2023	8 th Task Team meeting (webex)
26-28 Jun 2023	Task team to report to CGMS-51 plenary for decision/endorsement
Q3 2023	Publication of CGMS governance documents

All webex meetings starts at 12:00 UTC

ANNEX I: Initial list of future strategic topics as proposed by Members

ANNEX I: INITIAL LIST OF FUTURE STRATEGIC TOPICS AS PROPOSED BY MEMBERS

Based on inputs from CGMS members, this initial list has been established of future strategic topics which will impact activities of CGMS agencies and interactions with users:

- a. Evolution of user requirements – focus on NWP and operational interests from weather, climate and environmental communities, increased focus on disaster risk reduction, extreme weather events and water cycle, increased focus on NWP requirements and constraints on satellite observations;
- b. Increased challenges for user preparations of new satellite systems;
- c. Increased challenge to demonstrate the value of weather and climate-related observations and their impact on economies and societies;
- d. Need for data to support adaptation and mitigation under a warming climate, including monitoring of greenhouse gases content and emissions;
- e. Evolution of space architecture with increasingly integrated approach towards multi-sphere Earth System observations, and potential impact on users;
- f. Increased use of hybrid architectures of small satellites and operational backbone satellite networking;
- g. Interactions with commercial providers, including NewSpace;
- h. Operational agencies to be more involved in the preparation and implementation of innovative missions which can be considered as precursor of future operational systems;
- i. R&D agencies to benefit more from the capacity of operational agencies to distribute widely the products derived from their R&D missions
- j. Foster the establishment of a coordinated global space weather observation system suitable for space weather operations.
- k. Sharing experience and best practices in actual use of new satellite data (e.g., hyperspectral infrared sounders)
- l. Encourage the best practices of meteorological satellite applications, i.e. “meteorological satellite +”, such as “meteorological satellite + energy”, “meteorological satellite + space environment”;
- m. Promote the next-generation satellite data sharing system and related information exchange infrastructure based on cloud architecture
- n. Challenges to long-term sustainability of space operations and development of SSA/STC capabilities.
- o. Future combined LEO/GEO products;
- p. Roadmap towards inclusion AI/ML and Cloud technologies in operations;
- q. To enhance the satellite application capacity of developing countries.