

## CGMS FUTURE DIRECTION 2022+

### POSITION PAPER THEME: SOCIO-ECONOMIC BENEFITS

Lead: JMA

#### TOPIC DESCRIPTION AND RATIONALE FOR CGMS ENGAGEMENT

Socio-economic benefit (SEB) studies have become an increasingly important ingredient in convincing stakeholders of the value of the observations generated by satellite programmes. The main impact of SEB studies on decision-making is typically seen through the justification provided to policymakers/decision-makers for undertaking new activities, such as a future satellite programmes, with SEB inputs often crucial for:

- The approval of national budgets for satellite systems
- Maintaining political support for the global observing system effort

SEB studies also have a broader role in convincing a wide range of stakeholders (e.g. national and international organisations, user communities, general public, etc.) of the value of satellite systems, which generally manifests itself through the provision of services that ultimately depend on the availability of satellite observations.

#### Challenges/Opportunities for CGMS

- This topic had already been addressed by CGMS, and it had not proved possible to adopt a general best practice/standard methodology that would be suitable for all CGMS agencies.
- The focus should be on sharing individual agency experiences, practices, and outputs rather than trying to derive a common methodology.
- A repository for Case Studies is identified as of being potential interest for sharing information and for establishing benefits of bilateral efforts between CGMS members.
- On the other hand, a CGMS level action for global satellite observations is also needed for the communication between each CGMS member and stake holders at both national and international levels.
- As already considered by the CGMS Tiger Team (SETT), it has been conducted that such a CGMS level action would probably not be feasible due to the divergence of SEB requirements/needs amongst CGMS members.
- WMO had recently undertaken an SEB study for ground-based observations. If such an activity were to be conducted at a global level for satellite observations, WMO could be the appropriate body to lead such an activity with inputs and supports from CGMS members.
- The communication approach and sharing of messages for SEB outcomes is also important [e.g. national and international stakeholders, link to challenges (e.g. SDGs)].

#### Commented [AT1]: NASA input:

Figuring out how to document and share the benefits of satellite observations for climate seems especially challenging. Some efforts have been done that are worth looking at (especially those led by Bruce Weillicki). NASA's Applied Sciences program has supported work on the topics with its earlier "Valuables Consortium" and the recently selected (14 July 2022) NASA activity "Socioeconomic Assessments: Enhancing and Measuring the Value of Earth Observations for Informing Decisions" which should provide some useful information.

## LONG- AND MEDIUM-TERM GOALS FOR CGMS:

2 phases of activity are proposed to build upon the work of the SEB Tiger Team:

### *Phase 1, in the near-term (1-2 years):*

To collect and make available to CGMS members, SEB case studies of relevant satellite systems and, as appropriate, update the TT report to make reference to such case studies.

In addition, to assess the material for the purpose of identifying common practices in next phase.

Presentations of these studies to CGMS members would be encouraged, i.e. in the form of on-line workshops.

### *Phase 2, in the medium-term (3-4 years to completion):*

To request WMO to develop a study on the SEB value of the space-based observing system responding to WIGOS 2040 in cooperation with CGMS, similar to the one performed recently for the ground-based network<sup>1</sup>. This would then include enhancement of the communication of the outcomes between each CGMS member and stake holders at both national and international levels.

## IMPACT ON CGMS ACTIVITIES

- Increased challenge to demonstrate the value of weather and climate-related observations and their impact on economies and societies

## IMPLICATIONS ON CGMS STRUCTURE AND KEY DOCUMENTS

- Update/include in the HLPP and the Baseline as appropriate
- Development of repository for Case Studies

## IMPACT ON EXTERNAL INTERFACES

- WMO will publish the result of study on the SEB value of the space-based observing system responding to WIGOS 2040.
- Stake holders at both national and international levels will understand the importance of satellite observation.

## INITIAL LIST OF REFERENCE DOCS

- [CGMS TT report: Valuing Meteorological Satellite Programs: Guidelines for Socioeconomic Benefit Studies](#)
- [WMO and World Bank SEB study report for GBON: The Value of Surface-based Meteorological Observation Data](#)
- [The case for EPS-SG: Socio-economic benefits](#)
- Other agency docs?
- Consolidate other external reports/docs

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<sup>1</sup> <https://documents1.worldbank.org/curated/en/192461614151036836/text/The-Value-of-Surface-based-Meteorological-Observation-Data.txt>