



Our ref.: 20441/2022/I/GHG

12 September 2022

Annex: 1

Subject: Establishment of the joint Study Group on WMO Greenhouse Gas Monitoring

Action required: To inform of particular regional or national activities, upon which the GHG monitoring infrastructure could build

Dear Sir/Madam,

The Executive Council at its seventy-fifth session decided to form the joint Study Group on the World Meteorological Organization (WMO) Greenhouse Gas Monitoring (GHG) between the Commission for Observation, Infrastructure and Information Systems (INFCOM), the Commission for Weather, Climate, Water and Related Environmental Services and Applications (SERCOM), and the Research Board, with appropriate involvement of external stakeholders, to undertake the following tasks:

- (1) To develop the concept, including identifying the future vision for WMO-coordinated GHG-related activities, its outputs and expected contributions from and benefits for Members, leveraging synergies with existing frameworks such as the Global Atmosphere Watch (GAW) and the Integrated Global Greenhouse Gas Information System (IG3IS);
- (2) To submit a final proposal of the concept for its architecture with identified key gaps between Members' operational needs and existing relevant WMO activities to the Nineteenth World Meteorological Congress in 2023.

In this regard, I am pleased to inform you that the joint Study Group was established by INFCOM, SERCOM and the Research Board, with the Terms of Reference approved by the presidents of INFCOM and SERCOM and the Chair of the Research Board, as attached in the [annex](#).

The Study Group is composed of experts recommended/designated by INFCOM, SERCOM and the Research Board, and relevant international organizations and programmes, listed in item 6 of the Terms of Reference.

The Study Group will oversee the development of the concept note for the WMO greenhouse gas monitoring infrastructure, which will be considered by the second session of SERCOM and INFCOM (October 2022) and the Research Board (December 2022), followed by the seventy-sixth session of the Executive Council (March 2023) and the Nineteenth World Meteorological Congress (May 2023). A WMO Greenhouse Gas Monitoring Symposium will be convened in January 2023, with the aim of seeking input to the concept from a broad group of scientific, operational and policy-setting stakeholders. Information on the event will be provided in due course, through the WMO greenhouse gas monitoring infrastructure [website](#).

To: Permanent Representatives of Members with WMO

cc: Hydrological Advisers

I would like to ask for Members' support to the work of the Study Group by providing your vision and articulating your needs for such an infrastructure, and by participating in the discussion at the relevant WMO constituent body sessions and in other relevant forums. In addition, I would appreciate if you could inform us of particular regional or national activities, upon which the GHG monitoring infrastructure could build.

Yours faithfully,

A handwritten signature in black ink, appearing to read 'Zhang', written in a cursive style.

Dr Wenjian Zhang  
for the Secretary-General

## Joint Study Group on WMO Greenhouse Gas Monitoring

### Terms of Reference

*Approved, August 22, 2022*

Ref: 20441/2022-1.2.1

#### 1. Mandate

The June 2022 meeting of the Executive Council (EC-75) decided to form a joint Study Group between INFCOM, SERCOM and the Research Board (RB), with appropriate involvement of external stakeholders, to undertake the following tasks:

- (1) To develop the concept, including identifying the future vision for WMO-coordinated GHG-related activities, its outputs and expected contributions from and benefits for Members, leveraging synergies with existing frameworks such as the Global Atmosphere Watch (GAW) and the Integrated Global Greenhouse Gas Information System (IG3IS);
- (2) To submit a final proposal of the concept for its architecture with identified key gaps between Members' operational needs and existing relevant WMO activities to the Nineteenth World Meteorological Congress (Cg-19) in 2023.

Furthermore, the Executive Council decided:

- (1) To delegate the authority to develop and approve the Terms of Reference of this Study Group to the president of INFCOM, the president of SERCOM and the Chair of the RB;

The role of the Study Group is to oversee and coordinate a number of tasks (see Section 5). Many of these will need to be completed in time to provide necessary decision materials for consideration by SERCOM-2 and INFCOM-2 in October 2022; others will support decision-making by Cg-19 in May to June 2023.

#### 2. Reporting arrangements

The Study Group will present the interim results of its work to INFCOM, SERCOM and the RB and seek their feedback and/or endorsements. The ultimate aim is to present a concept proposal to Cg-19 for its deliberation and approval.

#### 3. Secretariat support

The Secretariat will arrange any necessary meetings and conference calls, provide drafting of documents, record decisions and action items, and track issues and actions as needed.

#### 4. Modalities of work

Most of the work will be conducted by email and videoconference, with the possibility of holding physical meetings when deemed appropriate by the Chair and if resources are available.

## 5. Tasks

- (a) Oversee and guide the further development of the concept for the GHG monitoring system, as per [Resolution 4 \(EC-75\)](#) - Development of a WMO-coordinated Global Greenhouse Gas Monitoring Infrastructure, taking into account the need to:
- Identify the primary users of GHG information and services and establish the priority needs of these users
  - Secure continued broad support for this development in the existing greenhouse gas monitoring community through building on existing activities and coordination mechanisms
  - Act without delay, given the importance of providing input to currently ongoing First Global Stocktake by the Parties to the Paris Agreement
  - Engage, as appropriate, all elements of the WMO governance structure in this development
  - Engage and closely collaborate with the wider scientific community and other UN agencies international entities (e.g. CEOS, CGMS, GEO, IOC/GOOS) with GHG monitoring activities, in particular the land surface and ocean observation and modelling communities
  - Minimize overlap with WMO activities by clearly positioning this infrastructure with respect to GAW and IG3IS;
- (b) Aim to present an early version of the draft proposal for the concept of this at INFCOM-2 and SERCOM-2 in October 2022 and the RB in December 2022 for their feedback and preliminary endorsement;
- (c) Convene a WMO Greenhouse Gas Monitoring Symposium in January 2023, with the aim of seeking input to the concept from a broad group of scientific, operational and policy-setting stakeholders;
- (d) Provide a draft concept proposal to EC-76 in February 2023, with the aim of getting EC recommendation for approval by Cg-19 in May 2023;
- (e) Take every opportunity to further socialize and seek input to the development of this concept, e.g. via scientific conferences, IPCC meetings, UNFCCC Workshops, COP27, IOC meetings, WMO Climate Policy Advisors.

## 6. Membership

The joint Study Group should be chaired by an INFCOM designated lead and is expected to consist of up to 20 members, representing:

- Infrastructure Commission (in particular SC-ON, SC-ESMP, SC-MINT)
- Services Commission (in particular SC-CLI, SG-URB and SG-ENE)
- Research Board (in particular GAW, IG3IS, WCRP, WWRP)
- GCOS
- GOOS
- CEOS
- CGMS
- GEO
- IPCC TFI

- Particular regional or national activities upon which the GHG monitoring infrastructure will be building on, e.g. from the European Union, Japan, US.

All WMO Regions should be represented. In addition to the representation listed above, the Executive Council may wish to appoint (a) focal point(s) as members. Furthermore, given the high level of interest in this topic it is likely that some WMO Members may wish to nominate their own representatives as additional members. Such requests may in principle be accommodated but should be discussed on an ad hoc basis between the Chair of the group and the respective member.

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