

# IAF Committee Briefs

November 2021

## IAF GLOBAL EARTH OBSERVATION SYSTEM OF SYSTEMS (GEOSS) SUBCOMMITTEE

### 1. Introduction

The Global Earth Observing System of Systems has entered an era of high importance on international political and business agendas due to the twin threats of global climate change and biodiversity reduction, and due to the tremendous shift in cost vs benefit profile of commercial and public / private partnership applications. The most noteworthy developments in partnerships, applications, GEOSS cooperation from May 2021 through November 2021 are highlighted. The IAF GEOSS Subcommittee promotes cooperation between space agencies and Earth focused organizations to address the changing climate, its impact on biota, and applications for sustainable development. The Subcommittee coordinates between the IAF and many of these organizations like the Group on Earth Observations (GEO), and works to highlight the latest advances in Satellite based Earth science to the IAC by conducting highlight lectures, plenary events and special sessions at the Congresses.

### 2. Summary

Dramatic advancements in technologies, business models, and science are providing the opportunity provide accelerating value to society as threats and impact along with opportunities to provide actionable information for societal and business decisions all increase. Satellite based earth observations are having more and more impact on applications that address environmental conditions, human activity, protection of the environment, and climate change mitigation.

### 3. Highlights

The biggest event of the year in Earth science was COP 26 in Glasgow Scotland. The Group on Earth Observations (GEO) community presented through the negotiations, side events and engagements outside the official COP26 events over the two weeks to promote

the role of Earth observations in providing actionable information for climate adaptation and mitigation. NOAA highlighted using space assts for monitoring and described the importance of in situ measurements.

GEO week starts in Nov 22, 2021. GEO is a partnership of more than 100 national governments and in excess of 100 Participating Organizations that envisions a future where decisions and actions for the benefit of humankind are informed by coordinated, comprehensive and sustained Earth observations. GEOSS provides the linkage between GEO and the IAF.

There is a major celebration planned for July 2022 to honor the 50<sup>th</sup> Anniversary of the launch of the first Landsat mission. At the same time, plans are underway to celebrate the 30<sup>th</sup> Anniversary of the launch of the first spacecraft dedicated to measuring sea surface height and the continuous measurements since that date. Sentinel 6 Michael Freilich was the recent member of this continuous chain of spacecraft.

Key present and upcoming events are as follows:

- November 2, 2021, U.K. Pavilion COP-26, WGIC, GEO and Climate Trace discuss GHG Monitoring from Space Report (virtual)
- October 24-27, 2022, Pecora-22, Denver, Colorado (see attached Hold-the-Date and Call-for-Abstracts)
- October 26, 2022, Landsat 50<sup>th</sup> Celebration at Pecora Conference
- November 14-18, 2022, ISRSE-39, Hanoi, Vietnam

### 4. Future Outlook

Public private partnerships both in observations (such as for greenhouse gas monitoring) and in applications (such as machine learning, data access, services) are coming to fruition and are expected to make major contributions that go beyond the traditional

Government provided services and commercially offered services. One example is the Carbon Plume Mapper effort within the USA.

## 5. Committee activities

GEOSS conducted several major activities during the IAC in Dubai including a Highlight Lecture celebrating the 20<sup>th</sup> Anniversary of the Disaster Charter (speakers included the heads of the three founding agencies - ESA, CNES, CSA), a Special Session on monitoring Ocean's health from Space to coincide with the UN Decade of Ocean Science (speakers include Heads of Earth science in several leading space agencies), an IAF Global Networking Forum session in conjunction with Young Professionals on Tuesday night at the Congress, and further discussion to support greater integration with GEO, Emerging Countries, and development of a new three year partnership with YPP. The GEOSS is identifying several new themes for events for the next IAC in Paris. GEOSS also supported GEO management by organizing and supporting a meeting of MENA members and GEO management at the IAC.

The committee also elected new Officers and re-confirmed members per IAF rules, and updated its announcements in the call for papers for IAC 2022 to highlight Green House Gas Monitoring. The GEOSS Subcommittee is working closely with the IAF SEOC Committee to foster new partnerships with Young Professionals, offer a new slate of Plenary and Special Session proposals and other cooperative activities. The GEOSS SC is shown below while meeting in Dubai.

