

# Draft Report 42<sup>nd</sup> Executive Committee Meeting Washington, D.C., U.S.A, 27 October 2017

#### **EXECUTIVE SUMMARY**

Chair: Stephen Volz, United States of America.

#### 1 OPENING SESSION

#### 1.1 Welcome from Lead Co-Chair and Co-Chairs

#### 1.2 Introduction of New Members

• Incoming new Executive Committee Members Argentina, Ecuador, Germany and Morocco were welcomed.

#### 1.3 Adoption of Agenda (Document 1 – for decision)

• The 42<sup>nd</sup> Executive Committee agenda was adopted with the amendment from the Lead Co-Chair.

### 1.4 Objectives and Expected Outcomes of Commercial Sector Round Table (Document 2 – for discussion)

The Executive Committee agreed that:

- The Commercial Sector Round Table was a first step and that the primary objective was to continue the dialogue;
- GEO needs to listen to the perspective of the commercial sector;
- There is opportunity for GEO to learn from the commercial sector's experience in developing services and products that reach millions of end users;
- Obtaining information about use and users would help GEO Members strengthen Earth observations infrastructure.

#### 2 COMMERCIAL SECTOR ROUND TABLE

#### 2.1 Commercial Sector Round Table

- The Executive Committee extended its appreciation to the representatives of the Commercial Sector for their support of GEO and for their insights into strengthening future engagement;
- The Executive Committee also agreed that GEO should:



- Examine successful examples of partnering between public and commercial sector organizations in other organizations, particularly at the international level;
- Consider examples of how open (free) and commercial (priced) Earth observations data have been successfully integrated to support user needs and under what circumstances:
- o Identify one or more initial opportunities for practical collaboration between GEO and commercial sector organizations; and
- O Determine how to continue the dialogue with the commercial sector at the executive level.

**Action 41.1**: The Secretariat to prepare a discussion paper detailing options for further engagement with the commercial sector, with particular attention to engagement at the executive level. **Due: 43<sup>rd</sup> Executive Committee meeting.** 

#### 3 STRATEGIC OUTLOOK 2018

#### 3.1 Lead Co-Chair Goals and Objectives for 2018 (Document 3 – for discussion)

• The Executive Committee approved the set of Goals and Objectives for 2018, as amended, for use in providing direction to the Secretariat and the Programme Board.

**Action 42.1**: Secretariat to propose a format for reporting on contributions to the Trust Fund pledged and received, for distribution at each Executive Committee meeting. **Due: 43<sup>rd</sup> Executive Committee meeting.** 

#### 3.2 Observations Regarding the GEO-XIV Plenary

• The Executive Committee thanked the United States and the GEO Secretariat for the excellent organization of the GEO-XV Plenary. Executive Committee Members interested in participating in the sub-group organizing the GEO-XV Plenary were requested to make their interest known to the Secretariat.

**Action 42.2**: Secretariat to provide the results of the Plenary participant survey, media coverage and other information on the GEO-XIV Plenary to Executive Committee to inform the planning for the GEO-XV Plenary. **Due:** 43<sup>rd</sup> **Executive Committee meeting.** 

#### 4 SESSION OUTCOMES AND ANY OTHER BUSINESS

#### 4.1 Executive Committee Meetings 2018

• The Executive Committee approved the dates for the 2018 Executive Committee meetings, noting that the dates for the 45<sup>th</sup> and 46<sup>th</sup> meetings remain tentative.

**Action 42.3:** Lead Co-Chair to draft a set of principles regarding the roles and responsibilities of, and interactions between, the Lead Co-Chair and the Secretariat. **Due: 43<sup>rd</sup> Executive Committee meeting.** 

#### 4.2 Any Other Business

• The Executive Committee agreed that the 43<sup>rd</sup> Executive Committee meeting would include an item on the agenda to discuss the outcomes of the Commercial Sector Round Table and next steps.



Action 42.4: Secretariat to propose follow-up actions with the commercial sector. <u>Due: 43<sup>rd</sup></u> <u>Executive Committee meeting.</u>

#### 4.3 Session Outcomes and Summary of Action Items

• The Executive Committee reviewed and approved the list of meeting outcomes and new action items.



## Draft Report 42<sup>nd</sup> Executive Committee Meeting Washington, D.C. U.S.A., 27 October 2017

#### **FULL REPORT**

Friday, 27 October 2017

Meeting convened at 9:00

Chair: Stephen Volz, United States of America.

#### 1 OPENING SESSION

#### 1.1 Welcome from Lead Co-Chair and Co-Chairs

Mr Stephen Volz, United States Co-Chair, Lead Co-Chair, noted that this was the first time that Executive Committee had met directly following a Plenary meeting. He stated his appreciation for the consistent support from Executive Committee Members. He then asked for introductions of all participants in the room.

Mr Mmboneni Muofhe, South Africa Co-Chair, welcomed the new Executive Committee Members, while acknowledging that some were not really new, having been in GEO for a number of years. He observed that the work coming out of the Plenary meeting the day before put GEO in the path of preparing an exciting program for the next year. He called on Executive Committee Members to show their commitment and lead GEO by example. He concluded with a warm welcome to all present.

Mr Pengde Li, on behalf of China Co-Chair Huang Wei, thanked the United States for hosting the Plenary meeting. He noted that there was much participation from many countries and stated that there were good results coming out of the discussion. In particular, he noted that the United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM) is very important for GEO; stating that while GEO is focused on Earth observations, UN-GGIM is focused on broader geospatial topics including national mapping and statistics. Mr Li highlighted that China will host the first World Geospatial Information Congress next year. This Congress will be an important stage for the world to share experiences and technology, and a chance for countries to make the world more intelligent. He stated that China has learned much from other countries and have developed innovations in China; the Congress will be an opportunity for others to come and see what China has been doing. Mr Li concluded by expressing his hope that a GEO meeting could be organized in conjunction with the Congress.

Mr Robert-Jan Smits, European Commission, extended a warm welcome to the new colleagues joining the Executive Committee. He also congratulated the United States hosts and all Executive Committee Members for a successful Plenary meeting, one of the best that GEO has had. Mr Smits stated that GEO showed how it was moving away from a data-centred approach to a user-centred approach; becoming less inward-looking and going toward users and policy-makers. The Plenary set the tone for the challenges ahead.



#### 1.2 Introduction of New Members

The Lead Co-Chair offered the floor to each of the new Members to make opening statements.

Argentina expressed their pleasure at returning to Executive Committee, having served a couple of times previously, and stated that they looked forward to working with the colleagues around the table.

Ecuador stated that they were excited to join the Executive Committee for the first time. Internally, they have faced some challenges in organizing their participation in GEO, but are looking forward to making a positive contribution. They believe that there are opportunities for cooperation in many areas. They are glad to see the shift toward an end-user orientation within GEO; with the planet under stress, it is important to have this view. Ecuador believes that GEO can help reduce the impact of natural hazards and also to make the general public aware of the importance of Earth observation information and its economic impact. GEO has a role in informing decisions and policy-makers and Ecuador is encouraging the preparation of policy briefings for decision makers.

Germany noted that this is their third time serving on Executive Committee. They stated that it is an exciting time, as GEO becomes more and more a user-driven organization. Germany would like to see an increased focus on the Global Framework for Climate Services (GFCS) process coming out of the World Meteorological Organization and the UN Framework Convention on Climate Change (UN FCCC) process. They stated that they would like to see consideration of climate and climate services incorporated into the GEO activities relating to the Sustainable Development Goals (SDGs). This, they believe, is the most important direction over the new few months and think that GEO will be able to demonstrate success on this.

**Outcome**: Incoming new Executive Committee Members Argentina, Ecuador, Germany and Morocco were welcomed.

#### 1.3 Adoption of Agenda (Document 1 – for decision)

The Lead Co-Chair proposed that preliminary observations by Executive Committee Members about the GEO-XIV Plenary meeting would be added to the agenda as item 3.2. He noted, however that there would still be a more fulsome discussion regarding the Plenary meeting at the 43<sup>rd</sup> Executive Committee meeting, once the survey results and other information had been compiled and analysed.

**Outcome:** The 42<sup>nd</sup> Executive Committee agenda was adopted with the amendment from the Lead Co-Chair.

### 1.4 Objectives and Expected Outcomes of Commercial Sector Round Table (Document 2 – for discussion)

The Lead Co-Chair opened the item by referring to the 40<sup>th</sup> Executive Committee meeting, where there had been much discussion about the right participants, the right tone, and the content for the discussion. Mr Volz introduced a few slides prepared as a basis for starting the discussion. As outlined in the slides, the proposed approach would be to explain GEO's strategy and priorities and then ask the commercial sector representatives to explain their perspective, strategies and experience with collaboration. GEO would then provide some specific examples, including the experience of Australia on Global Forest Observation Initiative, engagement challenges, and early GEO achievements. The discussion would then move toward the desired outcomes of engagement with the commercial sector. The aim would be to have a conversation back and forth, encouraging questions and comments throughout.

The Secretariat Director reminded the individuals providing briefings on the examples to keep the items short. She referred to some of the questions that came up during the commercial sector panel discussion at the Plenary meeting.

The Lead Co-Chair cautioned Executive Committee Members that, based on previous experience in similar meetings, that some firms may not feel comfortable to open up fully in front of other firms,



some of whom may be competitors, and so may limit their remarks to publicly-available information. It was important to ensure that everyone around the table remains engaged.

Australia stated that it was looking forward to the session. It noted that the commercial sector firms that would be participating were already part of the "club" in the sense that they were already involved in the delivery of Earth observations. The broader challenge would be to engage firms that were not already using Earth observations. Australia had already gone in this direction, deliberately reaching out to other industries, like transportation and livestock. This involved asking these firms what they need, as had also been mentioned by commercial sector during the panel discussion at Plenary. The opportunity for transformative change would be less with the commercial sector firms coming to this Executive Committee meeting because they are already working with Earth observations.

CEOS agreed with Australia that GEO should look further downstream into the user community if a similar session is held with the commercial sector again. It would also be important to engage smaller firms, including start-ups, as these were seen as more disruptive and innovative.

Finland welcomed the opportunity for dialogue. The fundamental question is about the global marketplace for Earth observations. Are the market and the existing knowledge within the sector good enough? Do they have the information they have enough information on all issues? It is important to look at concrete questions.

Japan stated that it views GEO as consisting of three partners: governments, international observing organizations, and researchers. In this framework, the role of the commercial sector comes in two phases: incubation and implementation. In incubation, the research community has the advantage because this requires considerable time, although perhaps in collaboration with the commercial sector, this process can happen more quickly. In the implementation phase, government has much power, but can encourage collaboration with the commercial sector. It will be important in this regard to have a clear framework form promoting such collaboration.

The United Kingdom responded that it agreed with the points made by the others. The commercial sector panel discussion at the Plenary meeting highlighted the way that Earth observations data moves through the value chain through several levels of users, each of whom adds value and provides products to further levels of users. The idea of a single end user is thus not accurate and the value chain comes to resemble a network.

The IEEE questioned the use of the word "observation", finding it misleading. The term "monitoring" has disappeared, even though it used to be central, for example, the original name of Copernicus referred to "Global Monitoring for Environment and Security". Who will do the monitoring now?

Mr Steven Ramage drew attention to how many large commercial sector firms are connected to "ecosystems" of other firms with whom they work, many of which are smaller. This offsets, to some extent, the under-representation of smaller firms among those participating in the discussion with Executive Committee.

China observed that the participation in this first commercial sector session is mostly from well-known global firms. More participation from small and medium-sized firms should be sought in future, especially from developing countries.

South Africa stated that there was a clear sense of what was expected from the GEO side, but that they were interested to know what the expectation was from the commercial sector. Also, how would the engagement is continued?

Australia said that they saw the discussion as a necessary and first step, and didn't want to send the impression that the meeting would not be useful. This is just a first step on a journey, the right people would be in the room, and there was much opportunity.

The European Commission stated that they were looking forward to the discussion with the commercial sector. From the panel discussion at the Plenary meeting, they took one key message:



make sure data are available so that the transformers of the data could do their work. It was recommended that the GEO presentations be kept short and that the Lead Co-Chair should be prepared to step in to keep the discussion on track.

The Lead Co-Chair observed that this had been a good discussion. There are benefits and risks to seeking engagement. The firms present represent some of the users, but not the ultimate users of Earth observations. They are part of the value chain. They want data that they can use to produce their services and products. They represent small, medium and large companies, just as GEO includes small, medium and large countries. They are also motivated to be productive and learning organizations because they work in a rapidly changing industry and can fail if they do not innovate. GEO can learn from them on what is working well in their products and their other experiences; GEO should leverage their interactions. The key is that Executive Committee looks for positive outcomes and how to continue to the next conversation. This could be broad or narrow, perhaps identifying a specific opportunity for a concrete collaboration. GEO Members need to protect their national interests as well. Some Members already have experience in working with some of these firms. It was also expected that the commercial sector participants will be interested in hearing from Executive Committee Members.

Finland added that GEO Members have provided much free and open data, but it is difficult to understand how this data is used. It may be useful to have feedback from the commercial sector on this usage. Since governments need to maintain the infrastructure, this could be a win-win opportunity.

**Outcomes:** The Executive Committee agreed that:

- The Commercial Sector Round Table was a first step and that the primary objective was to continue the dialogue;
- GEO needs to listen to the perspective of the commercial sector;
- There is opportunity for GEO to learn from the commercial sector's experience in developing services and products that reach millions of end users; and
- Obtaining information about use and users would help GEO Members strengthen Earth observations infrastructure.

#### 2 COMMERCIAL SECTOR ROUND TABLE

#### 2.1 Commercial Sector Round Table

The Lead Co-Chair welcomed participants and thanked the commercial sector guests for their involvement in the session. Participants introduced themselves and the organization that they represented.

The Lead Co-Chair opened the discussion, saying that it was the first formal consultation with the commercial sector, but not the last. Mr Volz noted that many of the firms were already working with GEO in various ways, but hoped that this session would lead to a process of further collaboration. The primary purpose for the session would be to recognize that there is a shared objective: how to make the most of our data-rich world and turn this data into information and knowledge to use effectively.

Mr Volz then spoke to a series of slides summarizing the current context for GEO, including GEO's three Engagement Priorities. He noted that GEO had spent the previous decade building a global community around Earth observations, but that the focus now was on working with users and delivering services. GEO recognizes the key role of the commercial sector in this task. The panel sessions during the Plenary meeting highlighted the importance of free and open data and the need to engage users from the start. GEO can help bridge the gap between data providers and users, but doesn't have the flexibility and adaptability of the commercial sector, thus some objectives can be served in part by the commercial sector.



A proposed set of topics for discussion was presented: 1) best partnering practices, 2) trends and growth plans, and 3) projected needs and anticipated challenges. GEO Members would provide a sense of GEO's needs and challenges, but wanted most to hear about the needs and views of the commercial sector. GEO is interested to know how this dialogue may be continued and what concrete steps might be taken over the coming months that could further each side's objectives.

Key points raised during the discussion included:

- There was general agreement on the objectives of the Round Table and that dialogue should be continued regularly at the executive level;
- Every business partners with other organizations; this is essential. GEO should not be afraid to reach out;
- Open data has tremendously helped build business opportunities; enables the commercial sector to services:
- GEO has a strong, reliable and enthusiastic partner in the commercial sector.
- Engagement with the commercial sector should focus on practical collaboration rather than on general policy;
- GEO and interested commercial sector organizations should work toward a joint plan based on common strategies. This plan does not need to be perfect and may be revised as experience is gained;
- GEO should look to successful examples of partnering between public and commercial sector organizations, e.g. United Kingdom Space Agency's International Partnership Programme and The Collider, a climate solutions initiative in North Carolina, U.S.A;
- The commercial sector is not participating in GEO to sell services, but to share experiences and find areas for mutual benefit;
- It was noted by one commercial organization that, contrary to popular belief, the commercial sector is not synonymous with "corporates"; rather Small and Medium size businesses constitute the majority of the commercial sector. Accordingly, GEO should make concerted efforts to include that category in its outreach and future dialogues;
- GEO and the commercial sector should work together to ensure sustainability of funding to support Earth observations;
- There is potential complementarity between the open and free data provided through GEO and the products and services provided by the commercial sector, e.g., different resolutions, higher value-added, although it is still not entirely clear how merging open and priced data should work in practice;
- Commercial sector firms are developing new technologies in many areas—e.g. superminiaturization, biodegradable sensors—that may at first seem unrelated to Earth observations but may provide solutions to some of the issues that GEO and its users are facing.
- Commercial sector involvement may also bring an altruistic mind-set, based in concerns
  of corporate social responsibility; the commercial sector recognizes the need for global
  sustainability;
- It is unusual for small companies to find themselves at the same table with larger global corporations. At the same time, in Africa and other developing regions, the commercial sector is mostly comprised of small companies. GEO's ability to bring all players around one table, regardless of size, makes GEO a uniquely attractive partner in creating opportunities for dialogues;



- The commercial sector has considerable experience in marketing and may be able to assist GEO in how to engage users and to get its message out;
- In many parts of the world, particularly in developing countries, smaller companies with local knowledge can help reach users, as they are already making a massive difference. Most countries depend heavily on small and medium-sized enterprises;
- There is tremendous opportunity to work with the financial services sector, e.g., how to use climate models to assess financial risks at the firm level;
- To reach true end-users, how the technology works should become invisible, e.g., as easy to use as a mobile weather forecast app. End-users don't want to deal with data directly;
- GEO needs to think about how to engage and develop mobile technology for Earth observations;
- Industry has moved away from transactional models of products toward simpler, cloud-based, service solutions, with different streams to address different markets:
- GEO should look toward tools that already exist in the commercial sector; GEO shouldn't develop these itself.

**Outcomes**: The Executive Committee extended its appreciation to the representatives of the Commercial Sector for their support of GEO and for their insights into strengthening future engagement.

The Executive Committee also agreed that GEO should:

- Examine successful examples of partnering between public and commercial sector organizations in other organizations, particularly at the international level;
- Consider examples of how open (free) and commercial (priced) Earth observations data have been successfully integrated to support user needs and under what circumstances;
- Identify one or more initial opportunities for practical collaboration between GEO and commercial sector organizations; and
- Determine how to continue the dialogue with the commercial sector at the executive level.

**Action 41.1**: The Secretariat to prepare a discussion paper detailing options for further engagement with the commercial sector, with particular attention to engagement at the executive level. **Due: 43<sup>rd</sup> Executive Committee meeting.** 

#### 3 STRATEGIC OUTLOOK 2018

#### 3.1 Lead Co-Chair Goals and Objectives for 2018 (Document 3 – for discussion)

The Lead Co-Chair introduced the document, which identified five Goals with a set of supporting Objectives for each. While the document refers to them as Lead Co-Chair Goals and Objectives, all of them are rooted in either Ministerial Declarations or Executive Committee decisions. The Goals and Objectives were intended to articulate the primary foci for the Executive Committee for the year, which would then guide the Lead Co-Chair in his interactions with the Secretariat, thereby ensuring these topics are addressed.

On Goal 1, Mr Volz stated that the focus on GEO's Engagement Priorities will continue in 2018 and that this work is thoroughly integrated into the Work Programme and the activities of the Programme Board and the Secretariat. The only new element is with the fourth Objective dealing with urban resilience and ecosystem accounting.



Picking up on this point, the Secretariat Director reminded Executive Committee Members that the GEO-XIII Plenary had asked that the three Engagement Priorities of SDGs, climate and disasters be addressed first, but that the Programme Board and the Secretariat should continue background work on the other two Priorities, preparing them to play a greater role in future. This is exactly what was being done in the session on emerging successes at the GEO-XIV Plenary, with presentations on the Global Human Settlement Layer and ecosystem accounting, and the keynote address by Peter Head which spoke directly to issues of urban resilience.

Mr Steven Ramage added that the Objective related to urban resilience and ecosystem accounting should be seen in the context of the six-step engagement process that was presented at the 41<sup>st</sup> Executive Committee meeting. The first of these steps involves identifying who GEO intends to work with, how it will promote that relationship, and how it will build on that relationship. Starting this step with urban resilience and ecosystem accounting will prepare GEO for when these are ready to become full Engagement Priorities.

Regarding the Objective related to the Sendai Framework and disaster resilience, Japan drew attention to the upcoming Global Forum on Disaster Risk Reduction, which will be hosted by the Science Council of Japan with the United Nations Office for Disaster Risk Reduction (UNISDR) and the International Council for Science (ICSU) at the end of November 2017. A representative of the UNISDR Secretary General and the UN Secretary General's Special Envoy on Disaster Risk Reduction and Water, Mr Han Seung-soo, will join the high-level panel at the event. The Science Council of Japan and the UNISDR have invited the GEO Secretariat (represented by Mr Ramage) to provide input to the high-level panel. GEO is also invited to contribute to a synthesis report on science and technology for disaster risk reduction, in particular, regarding the Earth observation component of the report.

On the Objective related to GEO Carbon and GHG Initiative, Finland expressed the view that it could be more precise. Now that the UN FCCC Conference of the Parties (COP) is starting work on its implementation guidelines for the global stocktaking, GEO should seek to have references to Earth observations-based solution included in these guidelines. This will not be finalized at the Bonn COP, so this could be a concrete focus for GEO's work over the next year. GEO will continue to build an observing strategy for carbon, but when there are policy documents being developed within international Conventions, GEO should use the opportunity to seek inclusion of language recognizing the role of Earth observations in these documents.

CEOS added that they will be participating in the Bonn COP and have finalized a strategy related to Earth observations of carbon. CEOS indicated that they would be interested in contributing to the direction proposed by Finland.

The Secretariat Director also supported the point from Finland and highlighted the GEO presence at the Bonn COP, in particular the exhibition area that was offered to GEO for the two weeks of the COP, the Side Event that is being jointly organized with the Global Carbon Observing System (GCOS), and GEO's participation in an invitation-only meeting of the Subsidiary Body for Scientific and Technological Advice (SBSTA). She added that in order for GEO to obtain full Observer status with the UN FCCC, it will require that GEO Members make representations with their UN FCCC delegations.

Finland stated that the two directions—seeking Observer status and seeking mention of Earth observation in official documents—were complementary and that each supported the other and together they would allow GEO to play a greater role in international Conventions.

Returning to the Goals and Objectives document, regarding Goals 2 and 3, the Lead Co-Chair observed that several of the Objectives imply a need for metrics to determine, for example, government and commercial sector involvement in the Work Programme and the breadth of involvement of Member agencies in GEO. It was noted that Executive Committee would look to the



Secretariat to provide information on the current status in these areas. There is also a need to GEO Members to be looking internally to understand their involvement in GEO.

Mr Steven Ramage reminded Executive Committee Members that the work on Goals 2 and 3 is not independent of that on the Engagement Strategy and that the Secretariat will need support from Members to achieve the Goals.

Argentina added that it is important that the Secretariat be in communication with the GEO Principals in each Member country, ensuring a coordinated approach. It is important that Principals understand which organizations in their countries are involved in GEO and how as this helps them to build their national GEO networks.

The Secretariat Director confirmed that it is the practice of the Secretariat to inform the GEO Principal when it hears of interest in participating in GEO from an organization within their country.

The Lead Co-Chair observed that, especially with the introduction of EuroGEOSS just prior to the GEO-XIV Plenary, there is increasing awareness of the power of the regional GEOSS organizations. GEO should start tracking information on the effectiveness of the regional GEOSS initiatives in engaging Members within their regions.

Australia remarked that Goal 3 is also linked to the sustainability of the Trust Fund. Broadening GEO involvement within each Member country helps to lessen dependence on a single agency for all of the engagement and contributions made by that Member.

The United Kingdom raised a concern with the wording of the first Objective under Goal 3, as the reference to "extend the EO user base" seemed to be at a different level than the other Objectives. The Lead Co-Chair noted that, while the document was not intended for further distribution, the words "among other things" will be added to the Objective.

Regarding Goal 4, Mr Ramage drew attention to the example of the World Bank, which has indicated its willingness to have a representative from GEO be located at the Bank as a liaison. Mr Ramage also pointed out that this would require specific funding for such a post. This is positive, but GEO is currently classed as a geospatial organization in the World Bank terms, meaning that GEO is less connected to other activities in the World Bank such as climate, disasters or agriculture. Accordingly, the GEO Secretariat has been engaging directly with the climate, disaster and SDG teams at the World Bank, who are outside the Geospatial and Land Team where GEO was originally assigned. In order to ensure collaboration and coordination across the World Bank, GEO has now been assigned a key contact person from the Bank's Geospatial Operations Support Team, Keith Garrett who leads this team. The relationship with the Global Partnership for Sustainable Development Data (GPSDD - part funded by the World Bank) and the United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM) also supports wider engagement with the World Bank, particularly since UN-GGIM and the World Bank recently announced a strategic engagement where EO will play an important role. The possibility of locating someone from GEO at the World Bank's offices should be considered by Executive Committee.

CEOS provided a clarification to Objective 3 under Goal 4 that it does not currently have a working group on this issue, although it could potentially become a Task Force. The Lead Co-Chair responded to request that the phrase referring to such a working group be removed from the Objective.

On Goal 5, the Lead Co-Chair stated that this Goal follows on a continuing theme about GEO's sustainability as an organization. The United States is working to improve awareness of the value of GEO within their government. The Secretariat Director added that the distribution of an indicative scale was a major move forward for GEO. While there may not be universal support for such a scale, several countries did indicate that having the scale was helpful, in some instances, for their internal processes in seeking contributions to the Trust Fund. More work still needs to be done, however, on seeking targeted secondments to the Secretariat.



Germany stated that they agreed with Goal 5 and the Objectives, but suggested that the Secretariat consider use of virtual secondments to address the gaps, as it would be easier to obtain support for virtual secondments than one based in Geneva.

Australia responded to Germany's suggestion, drawing attention to the current use of virtual secondments to the Secretariat in the case of staff from the United States. The mechanism does exist, but comes with its own challenges, such as travel support, and the experience thus far has been mixed. From a Budget Working Group perspective, while there have been some key actions taken, it is important that GEO not let the tempo drop that discussions with Members about the indicative scale continue. Executive Committee should consider how they might prompt Members at several points during the year to consider making contributions to GEO at times when Members may be making budgetary decisions. This should not be left to the next Plenary; it should remain active throughout the year if the budget gap is to be addressed.

Japan agreed that increasing contributions to the Trust Fund to secure the sustainability of GEO is a key challenge.

The Secretariat Director referred to the pledge from the United Kingdom at the GEO-XIV Plenary meeting to contribute a secondment to the Secretariat. She stated that this would be a "test case" for further use of virtual secondments. Previous experience, with the United States secondments, suggested that there is a substantial learning curve for newly seconded staff and so an initial period where they are based in Geneva prior to returning to their home organization might be useful. She also made the point that, for virtual secondments, since the organization would not be paying the additional costs associated with extended relocation to Geneva, the assumption should be that the travel expenses would be covered by the home country rather than the Secretariat. However, while there is certainly potential for virtual secondments, there is also a loss of some of the intangible benefits of being colocated with the other Secretariat staff, such as the opportunity for impromptu discussions.

The United Kingdom provided further precision regarding their pledged secondment, noting that travel expenses would be included as part of their contribution.

The Lead Co-Chair reinforced the need to maintain visibility regarding the contributions being made by Members to the Trust Fund, including secondments, and to the Work Programme, in terms of how many countries are contributing and the amounts. He requested that the Secretariat develop a proposal for how such information could be provided to Executive Committee on a regular basis through the year.

**Outcome**: The Executive Committee approved the set of Goals and Objectives for 2018, as amended, for use in providing direction to the Secretariat and the Programme Board.

**Action 42.1**: The Secretariat to propose a format for reporting on contributions to the Trust Fund pledged and received, for distribution at each Executive Committee meeting. **Due: 43<sup>rd</sup> Executive Committee meeting.** 

#### 3.2 Observations Regarding the GEO-XIV Plenary

The Secretariat Director initiated the discussion by referring to some initial results from social media tracking. Visits to the event website were 615% higher than in 2016. There were 533 downloads of the event app and thousands of individual sessions, which is remarkable considering that the number of downloads was close to the total number of participants. There were approximately 2500 tweets, with a combined reach of about 3.5 million people. Additional information will be available later, including press coverage, the media campaign and web analytics. A survey was sent out to all participants seeking their feedback, the results of which will be provided to Executive Committee at the next meeting. With regard to media coverage, the Secretariat Director was interviewed by a Chinese television network, which may have reached tens of millions of viewers.



Ms Madeleine West, GEO Secretariat Communications Manager, added that media coverage at Plenary was limited by some sessions being closed to outside observers, although there was more coverage of the side events than had been expected. A full review of media coverage and Plenary communications in general will be compiled and provided to Executive Committee.

The Lead Co-Chair asked whether information would also be compiled for the side events. The Secretariat Director responded that it is possible to report on number of registered participants of the side events, but since the Secretariat does not take minutes of these events, as they are organized by the GEO community, detailed reports are not always available for side events. On the total attendance at the GEO-XIV Plenary, there were 504 participants, making it the largest Plenary participation not coinciding with a Ministerial Summit. In addition, there were another 200 or so participants at side events who did not attend the Plenary meeting itself.

Finland commented that the Plenary meeting was well done and that the logistics were excellent. The panels varied in success, which is to be expected. Finland observed that such panels work better when there are some differences of views that give rise to more discussion back and forth. The use of the app for taking audience questions was good, but with the numbers of participants it may be useful to integrate polling of the consent of Members on approval of documents, etc. into the app.

Australia agreed that the Plenary was good. Feedback from new participants, including commercial sector organizations, was that the meeting was more dynamic than expected, the panels were an interesting way of engaging the audience, and the use of the app offered an interactive and democratic way to move questions up to the panel. There was also positive feedback on the availability of webcasts of the side events. Australia commended the United States and the Secretariat for being able to bring in so many innovations at a single Plenary meeting. Attendance also remained high, including by Heads of Delegations, right to the end of the second day of Plenary, which was a good sign.

The Lead Co-Chair also noted the value of using the app for asking questions during the panel sessions, but questioned whether the questions should be available to panel members during the discussion, as some may have been distracted by reading the questions on screen.

The United Kingdom agreed that attendance stayed through the second day of the Plenary meeting and added that the side events and exhibition were also very good. There was the right mix between the business sessions and panel discussions. There were a few negative comments heard regarding commercial sector sponsorship; this should be addressed by ensuring transparency on such arrangements.

Germany remarked that the organization of the Plenary meeting was perfect, the side events were very good, and presentations were very good. However, there may have been too many panel discussions relative to the business part of the meeting. The progress report should be available well before Plenary, there should be concrete discussion on what is happening in the Work Programme, and the app should be used to allow Members to indicate their views.

CEOS suggested that live streaming of the Plenary meeting be extended to all sessions, including the panel discussions. CEOS has a large constituency, only a few of whom are able to be on the delegation and so there are others who would be interested in following the Plenary discussions remotely.

China agreed with Germany regarding the structure of the Plenary meeting. Panel discussions are not common in China; it is sometimes difficult for developing country representatives to understand the important points during the discussion. In future, the Plenary structure should provide sufficient time for questions and ensure that there is a common understanding.

Finland commented that the panel sessions were good at stimulating discussion, but perhaps it would be improved by narrowing the focus to a single topic. The time could also be split between a part with the panel speakers and then time for GEO Members to comment and raise questions.

The Lead Co-Chair thanked Executive Committee for their comments. He observed that in the Executive Committee discussions in preparation for the Plenary meeting the focus had been on hearing



directly from the users; that was the reason for having the panels, to allow users to have a voice to the GEO community. He acknowledged the points from Germany and China that getting engagement from GEO Members is the key to responding to users and welcomed proposals that could help improve future meetings.

Japan added their appreciation for the work of the Programme Board and the Secretariat, in particular the Secretariat Director and Mr Douglas Cripe, for their management of the GEO Work Programme.

The Secretariat Director announced that Japan intends to create a sub-group to organize the GEO-XV Plenary and welcomes participation of Executive Committee Members. Initial discussions are also starting with respect to the 2019 Ministerial Summit, but a location has not yet been decided.

Japan invited Executive Committee Members to contact the Japanese delegation or the GEO Secretariat if they would be interested in joining the sub-group which will plan the GEO-XV Plenary. Australia indicated their interest in participating in the sub-group.

**Outcome**: The Executive Committee thanked the United States and the GEO Secretariat for the excellent organization of the GEO-XV Plenary. Executive Committee Members interested in participating in the sub-group organizing the GEO-XV Plenary were requested to make their interest known to the Secretariat.

**Action 42.2**: The Secretariat to provide the results of the Plenary participant survey, media coverage and other information on the GEO-XIV Plenary to Executive Committee to inform the planning for the GEO-XV Plenary. **Due:** 43<sup>rd</sup> Executive Committee meeting.

#### 4 SESSION OUTCOMES AND ANY OTHER BUSINESS

#### 4.1 Executive Committee Meetings 2018

The Lead Co-Chair proposed dates for the 2018 Executive Committee meetings. The 43<sup>rd</sup> Executive Committee meeting would be held on 8-9 March in Geneva, the 44<sup>th</sup> meeting on 18-19 July in Geneva, and the 45<sup>th</sup> meeting on 30 October. The exact date of the 45<sup>th</sup> Executive Committee meeting will be dependent on the final date for the GEO-XV Plenary meeting, which has still not been finalized. The 44<sup>th</sup> Executive Committee meeting will be the first meeting with the new Secretariat Director. While there had been discussion at the 39<sup>th</sup> and 40th Executive Committee meetings about the possibility of reducing the number of Executive Committee meetings, it had been decided that the number of meetings would remain the same for 2018 due to the transition to the new Secretariat Director. The number of meetings in 2019 will be revisited at a later date.

The Lead Co-Chair also stated that a statement of principles governing the interaction between the Lead Co-Chair and the Secretariat would be drafted and presented to the 43<sup>rd</sup> Executive Committee meeting. The intent of this document is to ensure that there is clarity about the roles and responsibilities of the Executive Committee and of the Secretariat. This document will build on the previous discussions at Executive Committee in 2016 and 2017 on roles and responsibilities, particularly regarding the strategic role of the Executive Committee.

The Secretariat Director suggested, following previous interventions by Australia, that the list of meetings also include the 46<sup>th</sup> Executive Committee meeting which would take place just following the GEO-XV Plenary meeting.

**Outcome:** The Executive Committee approved the dates for the 2018 Executive Committee meetings, noting that the dates for the 45<sup>th</sup> and 46<sup>th</sup> meetings remain tentative.

**Action 42.3:** The Lead Co-Chair to draft a set of principles regarding the roles and responsibilities of, and interactions between, the Lead Co-Chair and the Secretariat. **Due: 43<sup>rd</sup> Executive Committee meeting.** 



#### 4.2 Any Other Business

Finland asked for some initial reflection on the Commercial Sector Round Table. The overall impression was that it went surprisingly well. It was noted that it may be difficult to capture the discussion in the report given the many topics raised and the way that questions were often answered several speakers later and by someone other than the person to whom the question was addressed. Executive Committee should have the opportunity to discuss the results of the discussion further.

The Lead Co-Chair agreed that the report of the discussion will be key. The 43<sup>rd</sup> Executive Committee meeting should allow for discussion of the Round Table outcomes and there should be proposals for concrete next steps to take engagement with the commercial sector further.

**Outcome**: The Executive Committee agreed that the 43<sup>rd</sup> Executive Committee meeting would include an item on the agenda to discuss the outcomes of the Commercial Sector Round Table and next steps.

Action 42.4: The Secretariat to propose follow-up actions with the commercial sector. <u>Due: 43<sup>rd</sup></u> Executive Committee meeting.

#### 4.3 Session Outcomes and Summary of Action Items

**Outcome**: The Executive Committee reviewed and approved the list of meeting outcomes and new action items.

Meeting adjourned at 15:35.



## 42<sup>nd</sup> GEO Executive Committee List of Participants

Ohina	
China	
Dr Zhang Songmei Deputy Director-General National Remote Sensing Center Ministry of Science and Technology of P.R. China Building No. 8A, Liulinguan Nanli Haidian District Beijing 100036 China	Fax: +86 10 588 81 167 songmei.zhang@nrscc.gov.cn
Mr Chi Zhang Acting Director National Remote Sensing Center Ministry of Science and Technology of P.R. China Building No 8a, Liulinguann Nanli Beijing 100036 China	Fax: +86 10 588 81 167 zhangchi@nrscc.gov.cn
Mr Zhang Jing Project Manager National Remote Sensing Center of China Ministry of Science and Technology P.R. China N° 8A, Liulinguan Nanli Haidian District Beijing China	Fax: +86 10 588 81 167 zhangjing@nrscc.gov.cn
Dr Li Pengde Vice-President China GEO, the Inter-ministerial Coordination Group Deputy Director-General National Administration of Surveying, Mapping and Geoinformation of China No.28, Lianhuachi West Road Haidian District, Beijing,10048, P.R. China	lipdgeo@sbsm.gov.cn lipd@sbsm.gov.cn
Dr Xinming Tang Deputy Director-General Satellite Surveying and Mapping Application Center National Administration of Surveying, Mapping and Geoinformation No.1 Baishengcun Haidian District Beijing 100048 China	tangxinming99@qq.com



Ms Ye Fanghong Senior Engineer, GEO China Secretariat Satellite Surveying and Mapping Application Center National Administration of Surveying, Mapping and Geoinformation (SASMAC,NASG) No.18, Baishengcun, Haidian District, Beijing,10048, P.R. China	yefanghong@nrscc.gov.cn
Dr.Zhou Xiang Division Director Inistitute of Remote Sensing and Digital Earth Chinese Academy of Sciences No.9 Dengzhuang South Road Haidan District Beijing 100094 China	zhouxiang@radi.ac.cn
Prof. Li Xin Science Counselor Chinese Embassy in U.S. 305 International PI NW Washington, D. C. 20008 USA	lixin@lzb.ac.cn
Mr Zhang Huanzhao Second Secretary Chinese Embassy in U.S. 3505 International PI NW Washington, DC 20008 USA	zhanghz2016@gmail.com
European Commission	
Mr Robert-Jan Smits EC GEO Principal Director-General Directorate-General for Research and Innovation European Commission ORBN 03/136 1049 Brussels Belgium	Phone: + 32 229 63 296 robert-jan.smits@ec.europa.eu
Ms Jane Shiel EC GEO Co-Chair Representative Senior Policy Officer Earth Observation Sector Unit Climate Action and Earth Observation DG Research and Innovation European Commission CDMA 03/007 1049 Brussels Belgium	Phone: +32 2 296 2984 Fax: +32 2 29 50 568 jane.shiel@ec.europa.eu



South Africa	
Mr Mmboneni Muofhe Deputy Director General Science and Technology Department of Science and Technology Private Bag X 894 0001 Pretoria South Africa	Phone: +27 12 843 6341 Cell: +27 82 907 9856 Fax: +27 86 681 0057 mmboneni.muofhe@dst.gov.za mmbonenimuofhe@gmail.com buliswa.omodona@dst.gov.za
Mr Imraan Saloojee Manager Stakeholder and Business Development SANSA Earth Observation Enterprise Building, Mark Shuttleworth Street Innovation Hub Pretoria 0087 South Africa	Phone: +27 12 844 04 26 / +27 12 660 3035 Cell: +27 72 267 0583 Fax: +27 12 844 0396 isaloojee@sansa.org.za
Mr Humbulani Aaron Mudau Chief Director: Space Science Science and Technology Department of Science and Technology Department of Science and Technology Private Bag X 894 0001 Pretoria South Africa	Phone: +27 12 843 68 57 Fax: +27 82 306 72 08 humbulani.mudau@dst.gov.za humbla05@gmail.com pulane.rakgoale@dst.gov.za
United States	
Dr Stephen Volz Assistant Administrator Department of Commerce The National Oceanic and Atmospheric Administration (NOAA) 1335 East West Highway, Bldg. SSMC1 20910-3283 Silver Spring United States	Phone: +1-301-713-3578 Fax: +1-301-713-1249 stephen.m.volz@noaa.gov
Ms Virginia Burkett USGS USA	virginia_burkett@usgs.gov
Ms Yana Gevorgyan Senior International Relations Specialist NOAA Satellite and Information Service Department of Commerce The National Oceanic and Atmospheric Administration (NOAA) 1335 East-West Highway Room 7317 20910 3226 Silver Spring United States	Phone: +1 301 713 70 54 yana.gevorgyan@noaa.gov



Mr John Matuszak Senior Policy Advisor OES/EQT U.S. Department of State United States	Phone: +1 202 647 9278 matuszakjm@state.gov
Mr Albert J. DeGarmo International Relations Specialist NOAA 1335 East West Highway (7307) Silver Spring Maryland 20910 USA	Phone: +1 301 713 7201 Albert.degarmo@noaa.gov
Argentina	
Mrs Ana Gabriela Medico International Relations CONAE, Comisión Nacional de Actividades Espaciales Paseo Colon 751 1063 Buenos Aires Argentina	Phone: +54 11 4331 0074 Fax: +54 11 4331 3446 / +54 11 4331 2998 amedico@conae.gov.ar
Armenia	
Dr Armen Saghatelyan Director of CENS NAS RA National Academy of Sciences of the Republic of Armenia (NAS RA) Center for Ecological-Noosphere Studies NAS RA (CENS) 68 Abovyan str. 0025 Yerevan Armenia	Phone: +374 105 729 24 Mob.: +374 914 180 29 Fax: +374 105 729 38 ecocentr@sci.am eco-centr@rambler.ru
Dr Shushanik Asmaryan PhD in Geography, Head GIS and Remote Sensing Department GIS and Remote Sensing Department GIS and Remote Sensing Department of the National Academy of Sciences of the Republic of Armenia 68 Abovyan str. 0025 Yerevan Armenia	Phone: +374 105 729 24 Mob.: +374 940 082 14 Fax: +374 105 729 38 shushanik.asmaryan@cens.am shushanik.asmaryan@gmail.com
Australia	
Dr Stuart Anthony Minchin Chief of Division Environmental Geosciences Geoscience Australia GPO Box 378 Canberra ACT 2601, Australia	Phone: + 61-2-62499898 Mob.: + 61-428602791 Fax: + 61 2 62499964 stuart.minchin@ga.gov.au sminchin@gmail.com



Mr Jonathon Ross CEOS Executive Officer Environmental Geoscience Division Geoscience Australia (GA) Cnr Jerrabomberra Avenue and Hindmarsh Drive Symonstron ACT GPO Box 378 Symonston ACT 2609 Australia	Phone: +61 2 6249 5847 jonathon.ross@ga.gov.au
Ecuador	
Ms Rey Freire Second Secretary Embassy of Ecuador in Washington, D.C. USA	mfreirea@cancilleria.gob.ec
Ms Maria del Pilar Cornejo Marine Engineering, Biological Sciences and Natural Resources Escuela Superior Politecnica del Litoral Guayaquil Ecuador	Phone: + 59 34 2269451  mariadelpilarcornejo@gmail.com pcornejo@espol.edu.ec
Mr Rafael Santos Cardenas Military Geographic Institute of Ecuador Ecuador	rafael.santos@mail.igm.gob.ec
Finland	
Mr Mikko Strahlendorff Space Adviser Development Unit Administration Department Finnish Meteorological Institute Erik Palménin aukio 1 FI-00560 Helsinki Finland	Phone: +358 50 359 3795 Mob.: +358 50 359 3795 mikko.strahlendorff@fmi.fi
Germany	
Dr Paul Becker Vice President Deutscher Wetterdienst Frankfurter Strasse 135 63067 Offenbach Germany	Phone: +49 69 8062 2972 Cell: +49 172 4549775 / +49 (173) 3403443 Fax: +49 69 8062 3971 paul.becker@dwd.de
Dr Helmut Staudenrausch Earth Observation / National GEO (D-GEO) Secretariat Space Administration German Aerospace Center (DLR) Königswinterer Strasse 522-524 53227 Bonn, Germany	Phone: +49 228 447 594 Cell: +49 172 297 1590 Fax: +49 228 447 792 helmut.staudenrausch@dlr.de



Japan	
Ms Mami Oyama Deputy Director-General Research and Development Bureau Ministry of Education, Culture, Sports, Science and Technology (MEXT) 3-2-2, Kasumigaseki Chiyoda-ku Tokyo 100-8959 Japan	Phone: +81 3 6734 4181 Fax: +81 3 6734 4162 oyama@mext.go.jp
Mr Masafumi Sato Director for Environmental Science and Technology Environment and Energy Division Research and Development Bureau Ministry of Education, Culture, Sports, Science and Technology (MEXT) 3-2-2, Kasumigaseki Chiyoda-ku Tokyo 100-8959 Japan	Phone: +81 3 6734 4181 Fax: +81 3 6734 4162 msatou@mext.go.jp
Dr Tomohisa Yamamoto Official Environment and Energy Division Research and Development Bureau Ministry of Education, Culture, Sports, Science and Technology (MEXT) 3-2-2, Kasumigaseki Chiyoda-ku Tokyo 100-8959 Japan	Phone: +81 3 6734 4181 Fax: +81 3 6734 4162 tyamamoto@mext.go.jp
Ms Misato Yoshida Administrative Researcher Environment and Energy Division Research and Development Bureau Ministry of Education, Culture, Sports, Science and Technology (MEXT) 3-2-2, Kasumigaseki Chiyoda-ku Tokyo 100-8959 Japan	Phone: +81 3 6734 4181 Fax: +81 3 6734 4162 yoshida-misato@mext.go.jp
Prof. Toshio Koike Director International Centre for Water Hazard and Risk Management (ICHARM) Public Works Research Institute (PWRI) 1-6, Minamihara 305-8516 Tsukuba Japan	Phone: +81 (0)29 879 0854 Cell: +81 (0)80 1238 3119 Fax: +81 (0)29 879 6709 koike@icharm.org tkoike@hydra.t.u-tokyo.ac.jp



Uganda (did not attend)	
Mr Nikita Rassokhin Third secretary Section of peaceful uses of space Department for nonproliferation and arms control Ministry of Foreign Affairs of the Russian Federation 32/34 Smolenskaya-Sennaya Square Moscow 119200 Russian Federation	Phone: 8 (499) 244-26-94 rassokhin_nikita@mail.ru dnkv@mid.ru
Mr Sergey Uspenskiy Deputy Director SRC Planeta ROSHYDROMET 7, Bolshoi Predtechnsky Str. Moscow 123242 Russian Federation	uspenskys@planet.iitp.ru
Russian Federation	
Morocco (did not attend)	
Dr Yongseung Kim Principal Researcher National Satellite Operation & Application Center Korea Aerospace Research Institute 169-84, Gwahak-ro Yuseong-gu Daejeon, 34133 Republic of Korea	Phone: +82 42 860 2476 Fax: +82 42 870 3909 yskim@kari.re.kr
Mr Dong-Kyu Lee Deputy Director Space, nuclear and big science cooperation division Ministry of Science and ICT 47, Gwanmun-ro Gwachoensi 13809 Gyeonggi-do Republic of Korea	Phone: +82 2 2110 2793 Cell: +82 10 9325 82 78 Fax: +82 2 2110 0220 Idk@korea.kr kgeo@korea.kr
Korea, Republic of	
Prof. Hiroyuki Muraoka Senior Professor River Basin Research Center Gifu University Yanagido Gifu Japan	Phone: +81-(0)58 293 2064 Cell: +81-(0)90 1569 0438 muraoka@green.gifu-u.ac.jp hiroyuki.muraoka@gmail.com



United Kingdom	
Dr Iain Williams Defra Deputy Chief Scientific Adviser Department for Environment, Food and Rural Affairs Nobel House 17 Smith Square SW1P 3JR London United Kingdom	Phone: +44 208 225 7749 / +44 208 026 3533 iain.williams@defra.gsi.gov.uk
Observers	
CEOS	
Mr Jonathon Ross CEOS Executive Officer Environmental Geoscience Division Geoscience Australia (GA) Cnr Jerrabomberra Avenue and Hindmarsh Drive Symonstron ACT GPO Box 378 Symonston ACT 2609 Australia	Phone: +61 2 6249 5847 jonathon.ross@ga.gov.au
Dr Alex Held Principal Research Scientist Marine and Atmospheric Research CSIRO GPO Box 3023 Canberra ACT 2601 Australia	Phone: +61 26 246 5718 Mobile: +61 41 942 7313 Alex.held@csiro.au
Ms Kerry Ann Sawyer SIT Vice-Chair Team International and Interagency Affairs Satellite and Information Services National Oceanic and Atmospheric Administration (NOAA - NESDIS - IIA) 1335 East West Highway Room 7325 Silver Spring MD 20910 United States	Phone: +1 301 713 7074 / +1 301 713 2024 Cell: +1 202 309 3099 / +1 202 309 0399 Fax: +1 301 713 2032 kerry.sawyer@noaa.gov
IEEE	
Prof. René Garello Telecom Bretagne CNRS UMR 3192 LabSTICC - Pôle CID Technopôle Brest Iroise - CS 83818 29238 Brest Cedex France	Phone: +33 2 29 00 13 71 r.garello@ieee.org rene.garello@telecom-bretagne.eu



Commercial Sector	
Acclimatise	Mr John Firth CEO
Airbus	Mr John Murtagh Director of Strategy, Communications, Intelligence and Security a Airbus Defense and Space
Digital Globe	Mr Kumar Navulur Senior Director, Global Strategic Programs
EARSC	Mr Geoff Sawyer Secretary General
EIS Africa	Mr Sives Govender Competency Area Manager
eGeos	Mr Massimo Comparini CEO
Esri	Mr Lawrie Jordan Director of Imagery
Harris Corp	Mr Jack Hayes Harris Executive
Lockheed Martin	Mr Jamison Hawkins Director of Civil Space and Environment Programs
Raytheon	Mr Michael A. Fox Corporate Lead, Civil Space and Weather Programs
GEO Secretariat	
7 bis, avenue de la Paix Case postale 2300 CH-1211 Geneva 2 Switzerland	Phone: +41 22 730 8505 Fax: +41 22 730 8520 secretariat@geosec.org