

**The 2018 GEO Symposium**  
 11-12 June 2018  
 Salle Obasi, World Meteorological Organization  
 Geneva, Switzerland

Monday, 11 June 2018

Time	Topic
08:30	<b>Registration opens</b>
09:00 – 09:15	<b>Opening Remarks and Introduction of the GEO Secretariat</b> Barbara Ryan, <i>GEO Secretariat Director</i>
09:15 – 10:45	<p><b>Session 1 – Sustainable Development Goals, Climate Change Adaptation, and Disaster Resilience: Opportunities for Integration in the Application of Earth Observations</b></p> <p><b>Keynote presentation: “Living with Uncertainty, Democratising Risk Information”</b>                      Marc Gordon, <i>Head of Global Risk Analysis and Reporting, United Nations Office of Disaster Risk Reduction (UNISDR)</i></p> <p>In 2016, the GEO Plenary decided to focus its engagement efforts on three priorities aligned with global policy mandates: the United Nations 2030 Agenda for Sustainable Development, the Paris Agreement for Climate, and the Sendai Framework for Disaster Risk Reduction. Urban resilience was also considered in 2016 and is now an emerging priority area linked to the New Urban Agenda.</p> <p>This session will present several international activities in each of these areas, with particular attention to commonalities and opportunities for integration with the GEO Work Programme. Participants are invited to contribute ideas and examples that will help drive the future development of activities supporting the GEO engagement priorities.</p> <p><i>Moderator: Steven Ramage (GEO Secretariat)</i></p> <p><i>Panelists:</i></p> <ul style="list-style-type: none"> <li>▪ Ivan Petiteville (ESA)</li> <li>▪ William Sonntag (MIT Media Lab)</li> <li>▪ Heather Leson (Humanitarian OpenStreetMap Team)</li> <li>▪ Thomas Kemper (EC-JRC)</li> <li>▪ Stephen Passmore (Resilience Brokers)</li> </ul>
10:45 – 11:15	<i>Networking break (tea/coffee)</i>
11:15 – 12:30	<p><b>Session 2 – Challenges and Opportunities for Data Sharing and Data Management</b></p> <p>Data sharing, data management and the GEOSS Platform are foundational elements of GEOSS. To what extent are the GEOSS Data Sharing Principles and Data Management Principles being implemented in the GEO Work Programme? How does the GEOSS Platform make Earth observations data more discoverable, accessible and usable?</p> <p>These questions and more will be discussed in this session, which will provide an opportunity for participants to contribute to shaping future work priorities on data sharing and data management as well as improved leverage of the GEOSS Platform.</p> <p><i>Moderators:</i></p> <ul style="list-style-type: none"> <li>▪ Robert S. Chen (ICSU/CIESIN) and Zipho Tyoda (South Africa-DST)</li> </ul> <p><i>Panelists:</i></p> <ul style="list-style-type: none"> <li>▪ Wenbo Chu (GEO Secretariat): “GEO Data Sharing and Data Management overview”</li> <li>▪ Max Craglia (EC-JRC) and Stefano Nativi (EC-JRC/CNR): “What we found in exploring the GEOSS universe”</li> <li>▪ Steven F. Browdy (IEEE) and Miles Gabriel (Esri UK): “The development and analysis of the initial Data Sharing Survey and plans for its future”</li> <li>▪ Joan Maso (CREAF): “Levels of certification of the data management principles and the DMP label”</li> <li>▪ Robert Downs (WDS/CIESIN): “Describing the quality of geospatial data integrated with socioeconomic data”</li> <li>▪ Paola De Salvo (GEO Secretariat) and Guido Colangeli (ESA): “Importance of Data Management Principles for the GEOSS Platform and for data providers and users”</li> </ul>

Time	Topic
12:30 – 13:45	Lunch
13:45 – 15:15	<p><b>Session 3 – Addressing Gaps in Coordination of <i>In-situ</i> Terrestrial Observations</b></p> <p>A 2017 GEO survey of <i>in-situ</i> observing networks concluded that the most pressing need for more coordination is in the terrestrial domain. Strengthened coordination is required for many purposes, including implementation of the 2030 Agenda for Sustainable Development, and would benefit both observing organizations and end-user communities.</p> <p>This session aims to share achievements and challenges of <i>in-situ</i> terrestrial observation systems and networks, identify needs of coordinated observation systems from field observations to data sharing, and discuss opportunities and possible ways forward toward sustainable Earth observations.</p> <p><i>Moderator: Steven Ramage (GEO Secretariat)</i></p> <p><i>Panelists:</i></p> <ul style="list-style-type: none"> <li>▪ <b>Andre Obregon (GEO Secretariat)</b> – “Overview of the GEOSS In-situ Resources Foundational Task”</li> <li>▪ <b>Simon Eggleston (GCOS)</b> – “Perspective from the Global Climate Observing System”</li> <li>▪ <b>Michael Mirtl (ILTER)</b> – “Perspective from International Long-Term Ecological Research Network”</li> <li>▪ <b>Hiroyuki Muraoka (AP-BON)</b> – “Perspective from the Asia-Pacific Biodiversity Observation Network”</li> <li>▪ <b>Jouni Heiskanen (ICOS)</b> – “Perspective from Environmental Research Infrastructure”</li> </ul>
15:15 – 15:45	Networking break (tea/coffee)
15:45 – 16:00	<p><b>Lightning Talk: Why and How to Communicate Impact</b></p> <p><i>Speaker: Steven Ramage (GEO Secretariat)</i></p>
16:00 – 17:30	<p><b>Session 4 – Transformative Digital Technologies</b></p> <p>By 2030, it is expected that the landscape of Earth observation will be significantly transformed. Data will be processed and tagged throughout the acquisition chain, adding "intelligence" to sensors. Information and models will be driven more by data and less by theory, interacting with data acquisition, and requiring greater standardisation in measurement.</p> <p>This session will highlight developments in machine learning / artificial intelligence, unmanned aerial vehicles (UAVs), intelligent sensors, and crowdsourcing / citizen science with the intent to stimulate discussion on how the GEO community can shape future activities in response.</p> <p><i>Moderator: Mikko Strahlendorff (Finland-FMI)</i></p> <p><i>Panelists:</i></p> <ul style="list-style-type: none"> <li>▪ <b>René Garello (IEEE/IMT Atlantique)</b> – "Autonomous vehicles, intelligent sensors, and artificial intelligence"</li> <li>▪ <b>Sabrina Senatore (Univ. of Salerno)</b> – "Semantically enhanced UAVs to increase the aerial scene understanding"</li> <li>▪ <b>Ian McCallum (IIASA)</b> – “Crowd-sourcing and citizen science”</li> <li>▪ <b>Ivan Deloatch (USA-FGDC)</b> – “GEOSS evolution: A user-driven GEOSS for the future”</li> <li>▪ <b>Gilberto Câmara (GEO Secretariat)</b> – “Challenges in machine learning for Earth observation data analysis”</li> <li>▪ <b>Fabio Scotti (Univ. of Milan)</b> – “Artificial intelligence for environmental applications”</li> </ul>
17:30	Adjourn

Tuesday, June 12, 2018

Time	Topic
08:30	<b>Registration opens</b>
09:00 – 09:15	<b>Keynote presentation : Earth Observations for Impact</b> <i>Stephen Volz, GEO Lead Co-Chair for 2018</i>
09:15-10:45	<b>Session 5 – Regional Coordination</b> <p>The 2017 Work Programme Symposium demonstrated extensive activity within each Regional GEOSS that is not reflected in the Work Programme. GEO does not appear to be taking full advantage of sharing best practice across, nor finding synergies between each Regional GEOSS and other Work Programme activities addressing similar topics and issues.</p> <p>This session will focus on those activities identified as especially well-suited for execution in a regional GEOSS context, why they have been successful, and the added-value of being part of a Regional GEOSS. In addition, collaboration opportunities between each Regional GEOSS and with GEO Flagships, Initiatives and Community Activities (when relevant) will be explored.</p> <p><i>Moderators: Hiroyuki Muraoka (Gifu Univ.) and Imraan Saloojee (South Africa-SANSA)</i></p> <p><i>Panelists:</i></p> <ul style="list-style-type: none"> <li>▪ <b>Zipho Tyoda (South Africa-DST)</b> – “Perspective from AfriGEOSS”</li> <li>▪ <b>Angélica Gutierrez (US-NOAA)</b> – “Perspective from AmeriGEOSS”</li> <li>▪ <b>Xingfa Gu (China-RADI)</b> – “Perspective from AOGEOSS”</li> <li>▪ <b>Michel Schouppe (EC-RTD)</b> – “Perspective from EuroGEOSS”</li> </ul>
10:45-11:15	<i>Networking break (tea/coffee)</i>
11:15-12:30	<b>Session 6 – Engaging the Commercial Sector in the GEO Work Programme</b> <p>GEO’s mission can only be achieved with support from across the global Earth observations community, including the commercial sector. With almost 100 commercial organisations already active in the GEO Work Programme, there are opportunities for companies to collaborate with GEO Members and Participating Organizations across a number of areas.</p> <p>This session will highlight several examples from the GEO Work Programme of collaboration with the commercial sector. Participants are encouraged to consider how their own organizations could support or benefit from increased engagement with the private sector through the GEO Work Programme.</p> <p><i>Moderator: Steven Ramage (GEO Secretariat)</i></p> <p><i>Panelists:</i></p> <ul style="list-style-type: none"> <li>▪ <b>Geoff Sawyer (EARSC)</b></li> <li>▪ <b>Emmanuel Mondon (AdviceGEO)</b> – “EO Value Chain: Opportunities for Commercial Collaboration with GEO”</li> <li>▪ <b>Pat Cummins (Esri)</b> – “Contributing to GEO Work Programme Activities: Experience with Ecological Marine Units”</li> <li>▪ <b>Ian Schuler (Development Seed)</b></li> </ul>
12:30-14:00	<i>Lunch</i>

Time	Topic
14:00-15:30	<p><b>Session 7 – The Role of Earth Observations in Supporting the Paris Climate Agreement</b></p> <p>Earth observations are vital for effective policy compliance and decision making in the context of climate change mitigation and adaptation. While there is great potential for the GEO community to support the Paris Agreement, including in the mitigation, adaptation, and loss &amp; damage arenas, it remains unclear how to provide concrete and immediate support.</p> <p>In this session, speakers from UN Framework Convention on Climate Change (UNFCCC) Secretariat, the Intergovernmental Panel on Climate Change (IPCC) and the Global Climate Observing System (GCOS) will share current needs and discuss opportunities for supporting the political process. The session will lay the basis for a climate workshop the following day which will enhance understanding of how Earth observations can support the implementation of the Paris Agreement, and explore paths towards a more integrated approach to understanding, monitoring and predicting climate processes across the GEO Work Programme.</p> <p><i>Moderator: Mark Dowell (European Commission)</i></p> <p><i>Panelists:</i></p> <ul style="list-style-type: none"> <li>▪ <b>Joanna Post (UNFCCC)</b> – “Paris Agreement Follow-up and Systematic Observations”</li> <li>▪ <b>Abdalah Mokssit (IPCC)</b> – “Refinement of Guidelines for National GHG Inventories”</li> <li>▪ <b>Simon Eggleston (GCOS)</b> – “Paris and the Evolving Requirements of the Global Climate Observing System”</li> <li>▪ <b>Lars-Peter Riishojgaard (WMO)</b> – “WMO Observing System Contributions to Monitoring the Paris Agreement”</li> <li>▪ <b>Joerg Schulz (CEOS/CGMS)</b> – “Space Agencies Responding to the New Requirements”</li> <li>▪ <b>Michel Rixen (WCRP)</b> – “Grand Challenges in Climate Research”</li> <li>▪ <b>Michael Sideris (IUGG)</b> – “Earth Observation Applications and Challenges – The Geosciences/IUGG Perspective”</li> </ul>
15:30-16:00	<p><i>Networking break (tea/coffee)</i></p>
16:00-17:15	<p><b>Session 8 – Programme Board Round Table</b></p> <p>In this interactive session, members of the Programme Board and its Co-chairs will briefly reflect on topics discussed during the Symposium sessions as well as share thoughts on their vision for the structure of the 2020-2022 GEO Work Programme. Symposium participants will then be invited to provide any final thoughts and ideas as well as to query the Programme Board on any Symposium topic of their choice, including the next GEO Work Programme.</p> <p>An outcome of this session could include a set of recommendations for the Programme Board to consider in constructing the 2020-2022 GEO Work Programme so that it best demonstrates the convening power and added value of GEO as it delivers on its strategic objectives.</p> <p><i>Moderators:</i></p> <ul style="list-style-type: none"> <li>▪ <b>Ivan Deloatch (US-FGDC):</b> Programme Board Co-Chair</li> <li>▪ <b>Osamu Ochiai (Japan-JAXA):</b> Programme Board Co-Chair</li> <li>▪ <b>Ivan Petiteville (ESA):</b> Programme Board Co-Chair</li> </ul>
17:15-17:30	<p><b>Concluding Remarks</b></p> <p><b>Gilberto Câmara, Incoming GEO Secretariat Director</b></p>
17:30	<p><i>Adjourn</i></p>