Report of GEO-20 Plenary

As approved at the GEO-21 Plenary.

Wednesday, 7 May 2025

1 OPENING CEREMONY

1.1 Welcome from the Host

Luca Vincenzo Maria Salamone, Director General, Italian Space Agency, welcomed participants on behalf of ASI, celebrating 20 years of GEO's impact. He emphasized the critical role of Earth Observations (EO) in addressing global crises and highlighted Italy's contributions through satellite missions like COSMO-SkyMed and PRISMA. Salamone called for stronger partnerships to turn GEO's vision into action.

1.2 Opening remarks from the European Commission

Marc Lemaître, Director-General, Directorate-General for Research and Innovation, European Commission, welcomed participants and highlighted the EU's pride in sponsoring the Global Forum 20 years after GEO's founding in Brussels. He emphasized strong EU support through Copernicus and Horizon Europe, with nearly EUR 600 million (approximately CHF 560 million) allocated to GEO activities. Lemaître re-affirmed the EU's commitment to advancing Earth Intelligence (EI), boosting digital competitiveness, and funding new GEO initiatives, and he encouraged intensified global collaboration on EO.

1.3 Welcome and opening remarks from GEO Lead Co-Chair

Vice Minister Jiachang Chen, Ministry of Science and Technology, China, welcomed participants and praised GEO's 20-year legacy in advancing EO for sustainability and resilience. He reaffirmed China's dedicated support through initiatives such as the regional Asia and Oceania GEO (AOGEO) and EO platforms including SATCloud and SDGSAT-1. Chen emphasized international cooperation, open science, and China's plans to align its national and regional efforts with GEO's Post-2025 Strategy.

1.4 Reflections on 20 years of GEO's Impact

Yana Gevorgyan, Director of the GEO Secretariat, thanked the hosts and reflected on GEO's 20-year journey, rooted in the belief that decisions for the benefit of our society and the planet need to be informed by quality, trusted Earth Intelligence. She outlined GEO's evolution across five key phases, from its founding to today's focus on innovation and

partnerships. Gevorgyan emphasized the need to integrate EO with other data sources and leverage these resources to collectively develop breakthrough innovations for the benefit of society and the planet. She concluded with a celebratory video marking GEO's real-world impact.

1.5 Opening remarks from the Italian government

H.E. Anna Maria Bernini, Minister, Ministry of University and Research, Italy, welcomed participants to the GEO-20 Plenary, highlighting Italy's pride in hosting the event and its commitment to advancement in EO for tackling global challenges. She emphasized GEO's role in international cooperation and open data, noted Italy's contributions through the IRIDE programme and the European GEO (EuroGEO), and called for renewed dedication to EO for sustainable development and resilience.

1.6 Practical information for participants

Session Chair Nicola Pirrone, Research Director, National Research Council, and GEO Principal, Italy, provided logistical information for participants.

2 APPROVAL OF PLENARY AGENDA

2.1 Approval of Plenary agenda

Session Chair and Representative of the Lead Co-Chair, Xiaohan Liao, Institute of Geographic Sciences and Natural Resources Research, China, presented the Plenary agenda (GEO-20-2.1(Rev6) Plenary Draft Agenda): this was approved with an amendment to present the Post-2025 Strategy Implementation Plan (GEO-20-3.2(Rev1) Draft GEO Post-2025 Strategy Implementation Plan) for information, rather than for decision.

2.2 Approval of Draft Report of GEO-19 Plenary

The Draft Report of GEO-19 (GEO-20-2.2(Rev1) Draft Report of GEO-19 Plenary), was approved as circulated.

2.3 Presentation of new Members, Participating Organizations and Associates

Sara Venturini, Chief of Member Services, GEO Secretariat, presented new Members, Participating Organizations and Associates that joined GEO since the GEO-19 Plenary in November 2023.

The Plenary welcomed the Republic of the Maldives and the Republic of Benin as new Members of GEO, which brings the total number of GEO Members to 117 (116 Countries and the European Union as represented by the European Commission).

Amjad Abdulla, Director-General, Climate Change Department, Ministry of Tourism and Environment, Republic of the Maldives, expressed pride in the Maldives becoming a Member of GEO, and called for the inclusion of Small Island Developing States (SIDS) in the Executive Committee, emphasizing the need for dedicated representation due to the distinct climate challenges they face.

The Plenary welcomed six new Participating Organizations (POs), bringing the total to 157. These are: International Union for Conservation of Nature (IUCN), Alliance of Biodiversity International and the International Center for Tropical Agriculture (The Alliance), Taylor Geospatial Institute (TGI), Commission for Environmental Cooperation (CEC), West Africa ICT Action Network (WAICTANet), and Red De Laboratorios De Observación De La Tierra Para La Reducción Del Riesgo De Desastres (RedLabOT).

The Plenary then welcomed six new Associates, bringing the total to 22. These are: MDA Space, Women in GIS Uganda (WiGIS) (accepted as an Associate on condition that the GEO Secretariat receives a recommendation from the Uganda GEO Principal), Skywatch Space Application Inc., Voyager Search, European Space Imaging (EUSI), and AxelSpace Corporation.

(Document: GEO-20-Info-2.3 New Members, Participating Organizations and Associates).

3 PRESENTATION OF THE GEO POST-2025 STRATEGY IMPLEMENTATION PLAN AND GEO WORK PROGRAMME

3.1 Presentation of the GEO Post-2025 Strategy Implementation Plan

Franz Immler, Head of the Environmental Observation Sector, Directorate-General for Research and Innovation, European Commission, presented the Post-2025 Strategy Implementation Plan, developed through broad community input, providing a flexible framework for executing GEO's Post-2025 Strategy adopted at the GEO-19 Plenary in Cape Town. He noted the Post-2025 Strategy Implementation Plan builds on the 2016-2025 Strategic Plan and emphasizes open data, user-centred design, and policy alignment. Key goals include co-producing transformative programmes, enhancing global equity in environmental intelligence, integrating innovative technologies, greater youth involvement, and strengthening communications and advocacy activities. He noted the implementation of this ambitious strategy includes defined roles, key performance indicators (KPIs), and impact monitoring. Noting stakeholder engagement remains central, he called upon Members, POs, Associates, and the broader GEO community to contribute to its implementation.

3.2 Presentation of the Post-2025 GEO Work Programme by the Programme Board Co-Chairs

Justyna Nicinska, Senior International Relations Specialist, National Environmental Satellite, Data, and Information Service, National Oceanic and Atmospheric Administration, United States, and Programme Board Co-Chair, introduced the Post-2025 GEO Work Programme noting it as a result of 18 months of collaboration, calling it the heart of GEO's future. She emphasized its evolution toward delivering impact through strategic, outcome-focused, and sustainable Earth Intelligence, shaped by broad community input and guided by clear criteria for transformative work.

Evangelos Gerasopoulos, Director of the Institute for Environmental Research and Sustainable Development, National Observatory of Athens, Greece, and Programme Board Co-Chair, explained the programme's new structure, built around six thematic and two

cross-cutting focus areas, with a research-to-operations pipeline focused on delivering services, "Conveners" as spaces for stakeholder engagement, and “Enabling Mechanisms” providing supporting environment. He highlighted the evergreen, transparent, and impact-driven nature of the programme, designed to support user-oriented and scalable Earth Intelligence solutions.

Amos Kabo-Bah, Associate Professor and Dean of the International Relations Office, University of Energy and Natural Resources, Sunyani, Ghana, and Programme Board Co-Chair, presented key statistics from the GEO Work Programme, showing strong global engagement and co-ownership. He called for greater inclusion of underrepresented regions, particularly Africa, and emphasized the importance of co-design, detailed workplans, KPIs, and resource mobilization to implement the transformative agenda and ensure GEO’s relevance at all levels.

3.3 Interventions from the floor

Germany reaffirmed its strong support for GEO flagships including the GEO Land Degradation Neutrality Flagship (GEO-LDN), the GEO Global Agricultural Monitoring Initiative (GEOGLAM), and the GEO Biodiversity Observation Network (GEO BON), calling for increased joint and sustained resource contributions.

Switzerland thanked those involved with the development of the SIP and urged realistic expectations, as well as stronger communication and better synergy with international organizations, especially through messaging around policies, to increase awareness of GEO.

Japan endorsed the Post-2025 Work Programme and committed to continuing its contributions toward achieving Earth Intelligence for all.

France expressed support for the Strategy Implementation Plan and GEO Work Programme, emphasizing alignment with major global agreements and the importance of diversity, inclusion, and open data.

China endorsed the GEO Work Programme and called for active member engagement, operational readiness, and infrastructure development, reaffirming its readiness to collaborate.

Australia committed to supporting GEO through Digital Earth initiatives in the Pacific and Antarctica, promoting SIDS participation, and leading space agencies’ engagement with GEO as incoming Committee on Earth Observations Satellites (CEOS) Chair at the end of 2025.

Ecuador advocated for greater regional representation from the Americas on the GEO Executive Committee to ensure inclusive and equitable governance.

Armenia reaffirmed its commitment to EO development through national and international collaboration, aligned with GEO's vision.

Senegal welcomed the inclusivity of the GEO Work Programme and Post-2025 Strategy, calling for intentional efforts to bridge the digital divide and ensure stronger African participation in implementation.

The United States reaffirmed support for GEO, pledging continued contributions of expertise and resources to address national and community needs, endorsing the GEO Work Programme, and urging a focused effort on key environmental threats to advance GEO's core mission of Earth Intelligence for All.

Spain affirmed its commitment to the GEO Work Programme and emphasized the importance of cooperation, synergy, and long-term engagement.

The Democratic Republic of the Congo emphasized that the global challenges addressed by GEO require political and diplomatic strength and proposed that GEO seek formal recognition within the United Nations system to enhance its impact and ensure it has the authority needed to achieve its objectives beyond the scientific community.

Mongolia supported the GEO Work Programme and requested greater access to high-resolution data, as well as expanded technical cooperation and pilot projects in Asia.

Türkiye committed to supporting GEO through open data, regional collaboration, and operational EO applications in agriculture, disasters, and climate resilience.

Sweden expressed support for the Strategy Implementation Plan GEO Work Programme and pledged continued contributions to the GEO Trust Fund.

The United Arab Emirates endorsed GEO's vision and called for a stronger focus on impactful projects while supporting collaboration for global challenges.

Italy endorsed the GEO Work Programme and confirmed its commitment to supporting policy-relevant EO solutions aligned with the Post-2025 Strategy.

Nigeria reiterated its commitment to GEO, AfriGEO, and national efforts, encouraging private sector involvement in future GEO activities.

The Center for Environment and Development for the Arab Region and Europe (CEDARE) expressed full support for the Post-2025 Strategy and highlighted its youth initiative "Gaia Club," promoting digital EO skills across African universities.

The European Space Agency (ESA) confirmed ongoing support for the GEO Work Programme and emphasized the importance of continued provision of open satellite data.

The Pacific Community (SPC) committed to enhancing SIDS participation through Digital Earth Pacific and called for greater inclusion and data access for Pacific Island countries.

The United Nations Convention to Combat Desertification (UNCCD) declared their support for the Post-2025 Strategy Implementation Plan and Work Programme, welcomed GEO-LDN as a flagship, and called for stronger collaboration in the lead-up to COP17 and 2026 reporting.

The Committee on Earth Observations Satellites (CEOS) confirmed its ongoing partnership, listing multiple GEO initiatives it supports and announcing new collaboration through a biodiversity study team.

The Global Climate Observing System (GCOS) expressed readiness to further collaborate with GEO, particularly through the iClimate Action project funded by the European Commission.

The United Nations Framework Convention on Climate Change (UNFCCC) emphasized the critical role of GEO in supporting climate policy with real-time data, calling for enhanced partnerships, impact-focused EO tools, and continued collaboration.

4 MINISTERIAL ROUNDTABLE: EARTH INTELLIGENCE FOR ONE HEALTH

4.1 Introductory remarks

The session was moderated by Robert Barouki, Head of Public Health Department, National Institute of Health and Medical Research, France.

GEO Co-Chair Mmboneni Muofhe, Deputy Director General, Department of Science and Innovation, South Africa, opened the session by introducing the critical importance of integrating Earth Intelligence with One Health approaches to address interconnected global health challenges. He defined One Health, referencing the WHO constitution, and highlighted humanity's reliance on the Earth system. He emphasized that emerging and re-emerging infectious diseases, alongside rising prevalence of non-communicable conditions, pose escalating threats closely tied to environmental stressors including air and water pollution, chemical exposure, urbanization, climate change, and biodiversity loss. Muofhe called for bold political and financial commitments to support One Health initiatives within GEO's Post-2025 Strategy Implementation Plan.

Barouki introduced the concept of Earth Intelligence as defined in GEO's Post-2025 Strategy - the integration of EO with social science, enhanced by innovative technologies and advanced analytics - to support implementation of One Health approaches. He highlighted the foundational role of nature and healthy ecosystems, including forests, wetlands, oceans, and urban green spaces, in regulating disease transmission and supporting clean air, water, and food security.

4.2 Panel discussion with Ministers and high-level representatives

The roundtable featured a distinguished panel including: H.E. Amna bint Abdullah Al Dahak, Minister, Ministry of Climate Change and Environment, United Arab Emirates; Sandra Gallina, Director-General, Directorate-General for Health and Food Safety, European Commission; Musonda Mumba, Secretary-General, Convention on Wetlands; Stuart Minchin, Director-General, The Pacific Community; Simonetta Cheli, Director of Earth Observation Programme, European Space Agency; and Fabio Fava, Professor, University of Bologna, Italian Representative of the Strategic Configuration of Horizon EU.

H.E. Amna bint Abdullah Al Dahak (UAE) explained how Earth Intelligence is being integrated into the UAE's One Health governance and national strategy, linking climate change risks to health impacts. She emphasized the importance of data-driven, evidence-based policymaking, noting the value of satellite imagery and historical environmental data in shaping effective climate strategies. She discussed the UAE's approach to addressing climate challenges including heat stress, droughts, extreme weather events, and their impacts on vulnerable communities such as coastal areas subject to rising sea levels and agricultural communities. The Minister also highlighted the UAE's National Air Quality Agenda 2031, particularly the natural challenges posed by the region's exposure to sand and dust storms, and the health risks associated with PM2.5 pollutants, including

respiratory and cardiovascular diseases and impacts on children's cognitive development. She noted the agenda addresses both outdoor and indoor air quality, noting that humans spend up to 90% of their time in indoor environments. The Minister then called for a holistic, data-driven framework that integrates EO data to anticipate and respond to environmental threats. She discussed EO technologies' role in addressing climate-linked challenges in arid, water-scarce regions. Lastly, she referenced the UAE's collaborative approach through initiatives such as COP28's dedicated health and nature days and the upcoming UN Water Conference, which the UAE will co-host with Senegal in 2026, aiming to foster global partnerships for impactful climate and health solutions.

Sandra Gallina (European Commission) stressed the significant environmental impact on both communicable and non-communicable diseases and the need for cross-sectoral collaboration between health and environment authorities. She acknowledged the persistent challenge of working in institutional silos and highlighted key European initiatives including the Observatory on Health and Environment, early warning systems for mosquito-borne diseases, and infrastructure resilience assessments using satellite data to identify vulnerable hospitals and health facilities. She discussed how the European approach can better incorporate Earth Intelligence to protect vulnerable populations and emphasized international cooperation in harmonizing approaches globally through new EU strategies integrating One Health approaches.

Musonda Mumba (Convention on Wetlands) highlighted the critical role of wetlands for health and the alarming rate of wetland loss since 1970. As Secretary-General of the "oldest multidimensional environmental agreement" with 171 signatory member States, she emphasized the need for national wetland inventories and Earth Intelligence in quantifying loss impacts. She stressed the critical role of Indigenous peoples in early warning systems, citing examples of migratory birds carrying diseases across continents, and discussed the upcoming Global Wetland Outlook and Ramsar COP15, explaining how wetland monitoring data can be integrated with Earth Intelligence systems to support holistic One Health strategies.

Stuart Minchin (SPC) spoke about Pacific Island nations' vulnerability and their use of Earth Intelligence for sustainable development, providing examples of monitoring ocean health, coastal management, and public health access mapping. He shared a specific example of fish aggregating devices (FADs) instrumented with GPS and monitoring equipment for sustainable fisheries management. Minchin also shared a powerful personal story about a close family member's permanent disability from mosquito-borne encephalitis contracted at a wetland, emphasizing human consequences of environmental health challenges and the need for integrated animal, human, and ecosystem health surveillance in island contexts.

Simonetta Cheli (ESA) discussed ESA's collaboration with health organizations and EO capabilities through the Copernicus programme, providing free and open data globally. She mentioned key areas including air quality monitoring, heat extremes, mosquito habitats, and multi-hazard environmental health risk tracking. Cheli detailed ESA's 15+ year collaboration with UNEP and other UN agencies, emphasizing integration of satellite observations with ground-based measurements and local knowledge systems, and

described satellite EO's role in sustainable public health decision-making and capacity building support for developing nations.

Fabio Fava (Italy) highlighted EO's crucial role in addressing One Health challenges through prevention, monitoring, mitigation, preparedness, and response. He mentioned Italy's contributions via the IRIDE satellite program and the exposome infrastructure EIRENE, stressing the importance of combining EO with artificial intelligence (AI) and local knowledge systems. Fava discussed the platform EIRENE as a significant advance in connecting environmental exposures to health outcomes and outlined steps needed to connect data and tools to policy and decision-making processes at multiple levels.

4.3 Interventions from the floor and concluding remarks

The session included substantial engagement from the audience with questions and comments from multiple countries and organizations:

China highlighted its integrated approach using EO technology for environmental protection, ecosystem restoration, and reducing public health risks. It outlined China's integrated research on wildfire and health nexus spanning over 20 years and emphasized how this work supports the provision of scientific evidence for government decision-making across multiple agencies.

Italy asked the European Commission representative about handling the new air quality directive and the impact of indoor pollution, questioning how the One Health approach guides EU legislation in this area, particularly regarding the regulatory gap in indoor air quality standards. Sandra Gallina characterised integrating the One Health approach into EU legislation as a "philosophical conundrum" rooted in historical scientific silos, complicating cross-sectoral collaboration despite the Commission's best efforts.

The Maldives inquired how GEO can better support early warning systems for SIDS by integrating EO with local health and climate data, and how to translate this intelligence into public health interventions in data-scarce contexts. Minchin (SPC) responded by reiterating his personal story and emphasizing the need for enhanced surveillance systems.

Additional interventions emphasized the need for breaking down sectoral silos, with multiple speakers noting that crisis situations tend to force collaboration, but that proactive integration is essential. Several participants highlighted the importance of adequate funding and political commitment to sustain One Health initiatives.

Session Outcomes and Recommendations:

Barouki provided concluding remarks that summarized key takeaways aligned with the five pillars of GEO's Post-2025 Strategy. He emphasized how the discussion demonstrated Earth Intelligence as a tool for co-produced transformative programmes through multidisciplinary collaboration, the critical importance of increasing global equity in Earth Intelligence access, and the role of innovative technologies and innovations in revolutionizing disease outbreak prediction based on environmental changes.

The moderator highlighted the essential participation of Indigenous knowledge systems and youth in developing Earth Intelligence solutions, noting that the next generation will

inherit today's environmental health consequences. He stressed the need for integrated communication and advocacy to secure political and financial commitments, encouraging delegates to consider how their governments and organizations can contribute through data sharing, capacity building, funding, or advocacy.

The session ended with recognition that while tools, partnerships, and technical capabilities exist, success requires unprecedented political will, financial commitment, and institutional change to break down silos and truly integrate Earth Intelligence into One Health governance.

As a concluding highlight, a video presentation on sargassum blooms in Ghana from the GEO Blue Planet initiative was showcased, illustrating a concrete example of environmental-health interconnections requiring integrated monitoring and response systems.

4 MINISTERIAL ROUNDTABLE: EARTH INTELLIGENCE FOR DISASTER RISK REDUCTION

4.4 Introductory remarks

This session was moderated by Fausto Guzzetti, Senior Research Scientist, National Research Council of Italy, and former Director, Office for hazard prediction and prevention of the Italian National Civil Protection Department. He introduced the session by emphasizing the panel's aim to identify actionable steps and catalyse political commitments to advance the GEO Post-2025 Strategy.

The session was opened by Joanna Drake, Deputy Director-General, Directorate-General for Research and Innovation, European Commission, who emphasized the importance of leveraging Earth Intelligence to significantly advance global Disaster Risk Reduction (DRR) efforts and to support the Sendai Framework for DRR as well as initiatives such as Early Warnings for All, where GEO plays a crucial role as a supporting implementing partner. She stressed the need for actionable, evidence-based knowledge and solutions that are co-designed with users, from local communities to national authorities, to ensure relevance and impact. Drake also highlighted the EU's comprehensive approach to DRR, including the recent launch of the preparedness union strategy and the role of the European Union Civil Protection Mechanism (UCPM), emphasizing the use of real-time early warning systems, satellite monitoring, and geospatial data such as that from the Copernicus Emergency Management Service.

4.5 Panel discussion with Ministers and high-level representatives

The roundtable featured a distinguished panel including: H.E. Jorge Raúl Carrillo Tutivén, Minister, National Disaster Management Agency, Ecuador; Bernard Magenhann, Acting Director-General, Joint Research Centre (JRC), European Commission; Takashi Kiyoura, Deputy Director-General, Research and Development Bureau, Ministry of Education, Culture, Sports, Science and Technology, Japan; and Niels Holm-Nielsen, Practice Manager, Global Facility for Disaster Reduction and Recovery, The World Bank.

H.E. Jorge Raúl Carrillo Tutivén (Ecuador) presented Ecuador's national strategy for integrating Earth Intelligence into DRR. He highlighted the expanded use of the GEO Global Water Sustainability (GEOGLOWS) initiative's products for near real-time hydrological forecasting in rural and high-risk areas, and efforts to apply EO data across agriculture and water planning. He also noted the approval of a new Green Climate Fund project to build institutional capacity and embed EO into national policy.

Bernard Magenhann (European Commission) emphasized the EU's commitment to open-access EO through the Copernicus programme. He stressed the value of user-centred design and highlighted tools such as the Global Wildfire Information System (GWIS) and Human Planet Initiative as key applications of EO in disaster risk management, particularly when combined with AI.

Takashi Kiyoura (Japan) described Japan's updated 10-year EO policy and its alignment with GEO priorities. He highlighted the Data Integration and Analysis System (DIAS) platform, a GEO Work Programme activity supporting early warning systems in Asia and Africa. He highlighted co-developed flood alerts in the Philippines and announced DIAS expansion into Ghana and Kenya, emphasizing capacity building and local ownership through "train-the-trainer" models.

Niels Holm-Nielsen (World Bank) discussed the World Bank's role in financing national systems that integrate Earth Intelligence into development planning. He underlined the importance of bridging scientific data and practical application, especially in low-resource settings, and acknowledged the Bank's "digital earth specialists" who support integration of EO into climate-resilient infrastructure and investment decisions.

4.6 Interventions from the floor and concluding remarks

The discussion featured active participation from countries and organizations, with interventions highlighting how Earth Intelligence can be better leveraged for DRR.

France emphasized the urgent need to support climate-vulnerable nations, particularly SIDS and Least Developed Countries (LDCs), through initiatives like the Climate Risk and Early Warning Systems (CREWS), and called for GEO to align closely with these efforts.

Finland highlighted the importance of integrating local knowledge with global EO systems and stressed capacity building through academic collaboration and practical training.

Türkiye reflected on its experience with recent earthquakes, underscoring the need to strengthen early warning systems and enhance international cooperation to improve their effectiveness.

The United Kingdom supported developing local ecosystems of practitioners capable of applying EO data, emphasizing long-term engagement through university partnerships and hands-on training.

Switzerland called attention to the importance of local ownership and sustained capacity development, noting that effective disaster preparedness must be grounded in community knowledge and technical skills.

CEOS shared progress on the EO for Disaster Risk Management (EO4DRM) initiative, particularly the Recovery Observatory, and asked how post-disaster EO assessments could be scaled and integrated into broader DRR frameworks.

Bernard Magenhann (EC JRC) responded by emphasizing the importance of user co-design and historical data analysis, noting the role of AI in forecasting and the need for scalable, resilient systems.

Takashi Kiyoura (Japan) highlighted the importance of replicability and local ownership, citing Japan's experience co-developing flood early warning systems through DIAS with embedded training components.

Niels Holm-Nielsen (World Bank) acknowledged the challenges of translating data into action, particularly in low-resource settings, and reaffirmed the Bank's commitment to scaling impact through partnerships and applied Earth Intelligence.

Session Outcomes and Recommendations:

Guzzetti closed the session by highlighting three key takeaways aligned with GEO's Post-2025 priorities. First, he emphasized the importance of grounding national and regional Earth Intelligence efforts in emerging technologies such as AI. He pointed to practical examples from Ecuador, Japan, and the European Commission's Joint Research Centre, including platforms such as the GEOGLOWS initiative, the Global Wildfire Information System (GWIS), and the Human Planet Initiative.

Second, he underscored the value of sustainable and inclusive co-design, citing Japan's train-the-trainer approach and Ecuador's work with local communities as models for building long-term capacity and ensuring local ownership.

Third, he stressed that impactful DRR requires targeted investment to connect EO data to policymaking. This was illustrated by Ecuador's Green Climate Fund-supported project and the World Bank's integration of Earth Intelligence into development financing.

The session concluded with a video presentation on GEOGLAM, highlighting how agricultural monitoring contributes to both food security and disaster preparedness in Malawi.

4 MINISTERIAL DECLARATIONS OF SUPPORT FROM GLOBAL LEADERS AND ADOPTION OF THE GEO WORK PROGRAMME

4.7 Additional Declarations of Support from Global Leaders

H.E. Gilbert K. Kabanda, Minister, Ministry of Scientific Research and Technological Innovation, Democratic Republic of the Congo (DRC), reaffirmed the DRC's commitment to GEO, outlining its new public service, GEO Congo, and calling for international support in implementing its Earth Intelligence-based national development priorities.

H.E. Orsolya Ferencz, Ministerial Commissioner for Space Research, Ministry of Foreign Affairs and Trade, Hungary, reaffirmed Hungary's alignment with the GEO Post-2025 Strategy Implementation Plan and GEO Work Programme and highlighted the role of the

Lechner Knowledge Center as a national EO hub supporting international collaboration and public policy integration.

H.E. Nosipho Nausca-Jean Jezile, Ambassador of South Africa to the Italian Republic, South Africa, announced the country will double its annual financial contribution to GEO from ZAR 2 million to 4 million (CHF 185,500), and reaffirmed support through national coordination platforms and active engagement in key GEO activities.

H.E. Martin Andjaba, Ambassador Extraordinary and Plenipotentiary of the Republic of Namibia to the Federal Republic of Germany, Namibia, highlighted national EO applications in drought monitoring, conservation, and coastal zone management, and reaffirmed its commitment to GEO through continued partnerships.

Cheikh Mbow, Director-General, Centre de Suivi Ecologique, Senegal, detailed extensive EO initiatives, including satellite development, flood monitoring, and biodiversity observatories, and announced that Senegal will host the AfriGEO Symposium 2025, while calling for increased investment in African EO capacity.

Xiang Gao, Director-General, China Science and Technology Exchange Center, Ministry of Science and Technology, China, reaffirmed sustained financial support to the GEO Trust Fund and GEO Work Programme projects, highlighting the CNY 132 million (approximately CHF 15 million) in funding over the past five years, and announced ongoing and future support for youth engagement and regional coordination through AOGEO.

Joanna Drake, Deputy Director-General, Directorate-General for Research and Innovation, European Commission, committed to increasing GEO Trust Fund contribution by over 33%, including support for a Regional Coordinator post in the Secretariat, and the GEOGLAM flagship. This is part of the overall investment of EUR 15 million (approximately CHF 14 million) for new EuroGEO actions in 2025, supporting the GEO Blue Planet office via EU4Ocean, backing GEOGLAM and the Human Planet Initiative through the Joint Research Centre, supporting the In Situ Working Group via the European Environment Agency, channelling funding to the Global Ecosystems Atlas through the EuroClima project, supporting the GEO Global Heat Resilience Service via the iClimateAction Project, including funding for an additional post in the GEO Secretariat, and continuing its strong support for EO through the Copernicus programme.

Dirk Engelbart, Director, Meteorology, Earth Observation and German Meteorological Service, Federal Ministry for Digital and Transport, Germany confirmed its ongoing annual contribution of EUR 200,000 (approximately CHF 187,000) to the GEO Trust Fund and highlighted in-kind support through long-term funding of global EO data centres and secretariat support for the GEO-LDN Initiative.

4.8 Adoption of the Post-2025 GEO Work Programme

The Post-2025 GEO Work Programme (GEO-20-3.3(Rev2) Post-2025 GEO Work Programme) was approved with no objections by Plenary.

Thursday, 8 May 2025

5 GEO PLENARY BUSINESS: FIT FOR PURPOSE FOR THE FUTURE

5.1 Presentation by the GEO Budget Working Group: Approval of the 2025 Secretariat Budget

Jean Dusart, Policy Officer, Environmental Observations Sector, Directorate-General for Research and Innovation, European Commission, presented the 2025 GEO Secretariat budget for approval. He noted that the budget (including associated staff costs) was based on assumption of "full funding," i.e. all projected contributions being received. However, he also noted uncertainty relating to over 40% of GEO Secretariat funding for 2025.

Dusart updated that financial scenario planning has been undertaken in consultation with the GEO Budget Working Group and Executive Committee. He added that the Secretariat is monitoring its funding situation closely, and outlined funding risk mitigation actions implemented to date, including increased Member and private sector resource mobilization efforts and selected budget reductions. He noted that the Secretariat is awaiting funding updates from three major donors and continues to implement the guiding principle (as directed by the Executive Committee) of matching expenditure to projected income.

Dusart noted that any significant reductions in funding will require swift reductions in planned expenditure and emphasised the opportunity for members to step up their funding contributions to ensure continued provision of services and support, noting that only 12% of GEO Members contribute financially to the Secretariat.

Several Members including **China, France, Italy, and the United States** voiced their support to the proposed budget, with emphasis on the importance of servicing members and advancing the GEO Work Programme.

The 2025 GEO Secretariat budget (GEO-20-5.1a: 2025 GEO Secretariat Budget) was approved as distributed.

5.2 Presentation by the Co-Chairs of the Rules of Procedure Task Force: Approval of the Review of the Rules of Procedure

The Rules of Procedure Task Force (RoP TF) Co-Chairs Lulekwa Makapela, Manager, National Earth Observations and Space Secretariat, South Africa, and Lawrence Friedl, Senior Engagement Officer, National Aeronautics and Space Administration, United States, provided an overview of the work undertaken by the Task Force and outlined the workings behind the proposed process and the expansion of the Americas and Africa caucuses. They then presented an overview of the Terms of Reference of the new RoP TF and requested approval of the special permission to operationalise the new RoP TF from the Plenary.

Members expressed support for the work carried out by the RoP TF and the need to align the Rules of Procedure with GEO's future direction and strategic vision. The Maldives and SPC emphasized inclusivity, particularly for SIDS, and called for clarity on how non-Executive Committee members could join the new RoP TF and contribute. China, Canada,

and South Africa endorsed the recommendations and expressed appreciation for the RoP TF's work. The RoP TF's composition, initially limited to Executive Committee members, was seen as a chance to broaden participation moving forward.

The update on the new Rules of Procedure (GEO-20-5.2: Update on the Review of the Rules of Procedure) and the request for special Plenary's permission to operationalize the new RoP TF were approved (GEO-20-5.2c: Request for Special Plenary's Permission to Operationalise the New Rules of Procedure Task Force) with a provision for an increased number of seats after Plenary, and the current RoP TF was dissolved.

5.3 Presentation of Executive Committee Members 2025

The Executive Committee Members for 2025 were approved (GEO-20-5.3 Executive Committee Members 2025).

5.4 Presentation of the GEO Secretariat: in Service of the GEO Community

The GEO Secretariat presented its work in service to the GEO community, including statistics on key projects and initiatives over the previous year. Members expressed great appreciation for the Secretariat's work.

The United Kingdom highlighted the importance of monitoring and evaluating the socio-economic impact of GEO Work Programme initiatives and in-country projects and recommended the Secretariat to focus on this effort, while noting that the videos were helpful and encouraging more of them.

The United States emphasized the importance of creating a narrative and a business case for GEO that can be utilised by Members to solicit support and endorsement at the political level, and acknowledged the Secretariat's work across and within all teams.

China expressed sincere appreciation for the Secretariat's behind-the-scenes support and emphasised the invaluable impact of Member engagement in achieving GEO's mandate.

Nigeria acknowledged and appreciated the Secretariat's efforts.

The Maldives thanked the Secretariat and expressed readiness to support outreach to other SIDS and ensure adequate resources for GEO Work Programme implementation.

The European Commission thanked all involved in the planning of the Global Forum and emphasized the importance of maintaining a collaborative spirit and focusing on common goals.

6 KEEPING OUR PROMISES TO YOUNG PEOPLE

This session was moderated by Samuel Amos, GEO Youth Community of Practice.

6.1 Keynote

Dr Musonda Mumba, Secretary-General, Convention on Wetlands, delivered a keynote address that reflected both personal experience and a call to action. She opened with words of appreciation for the diversity in the room and congratulated the Secretariat

Director and her team for their work. Reflecting on her own journey, she underscored the importance of lifelong learning and dedication to environmental stewardship.

6.2 Panel discussion with youth representatives from the GEO community

This session brought together youth from the GEO Community to reflect on the Post-2025 Strategy Implementation Plan, Goal 4, identify key barriers and opportunities for youth engagement in EO, and discuss their current contributions to GEO's work.

The panel discussion included: Yipei Gong, Programme Officer, Aerospace Information Research Institution, Chinese Academy of Sciences (AIRCAS), China; Lena Moral Waldmeier, Communications and Stakeholder Engagement, Apacheta, Spain; Felipe Carlos, Full Stack Developer, Group on Earth Observations Knowledge Hub, Brazil; Nasiphi Ngcoliso, Junior Remote Sensing Scientist, South African National Space Agency, South Africa; and Giorgio Bagolan, participant of the 2025 GEO Youth Ideathon, Italy.

Perspectives on the Post-2025 Strategy Implementation Plan

Panellists broadly welcomed the Post-2025 Strategy Implementation Plan as a forward-looking and actionable framework. They highlighted its relevance to youth, particularly goal 4, which was seen as foundational to achieving the plan's broader objectives. Comments emphasized the ambition, innovation, and potential of the plan to shape career paths and facilitate youth-led solutions in EO.

Challenges and Needs

Panellists pointed to several persistent barriers to meaningful youth engagement. These included limited financial support for education and training, visa, and legal obstacles to participation in international initiatives, and a lack of mentorship programmes that bridge the gap between academic knowledge and practical industry skills. The disconnect between academia and industry was noted as a structural issue that leaves young professionals underprepared for real-world applications.

Capacity building was identified as a critical need, particularly for youth in under-resourced or disaster-prone regions. Speakers emphasized that targeted support, such as funding for on-site training, skills development, and access to offline EO tools, can significantly enhance local resilience and long-term impact.

The Role of Youth in Earth Intelligence

The panel highlighted youth as active contributors to EO and Earth Intelligence efforts, not just future stakeholders. Several participants shared how they are already working to operationalize the Post-2025 Strategy Implementation Plan through community engagement, training workshops, and youth networks within the GEO and broader environmental science communities. They emphasized the value of youth-led approaches that combine technological innovation with on-the-ground insight.

Panellists also stressed the importance of inclusive approaches that treat young people as equal partners in co-designing EO solutions. Drawing from experiences such as the GEO-LDN initiative and regional projects in Africa and Europe, they noted that youth are well-positioned to connect science with the needs of local communities.

Investing in Youth: Looking Forwards

When asked what kind of world could emerge from investing in youth, panellists described a more integrated and solutions-oriented EO ecosystem, one where young professionals lead in research, policy, and innovation. They called for more unified global engagement to scale youth participation and turn promising ideas into tangible outcomes.

Current Contributions

Each panellist shared their ongoing work, including capacity building workshops in Asia, engagement in youth caucuses, technical work within GEO platforms, and outreach to improve EO accessibility. These activities were framed as direct contributions to the delivery of the Post-2025 Strategy Implementation Plan goals.

Closing Reflections and Member Support

The moderator invited participants to consult the *Youth Declaration of Cape Town* and encouraged further involvement through the GEO Youth Community of Practice.

Several GEO Members and partners voiced support for strengthening youth engagement.

Germany expressed strong support for Goal 4 of the Post-2025 Strategy Implementation Plan, and committed to expanding their support to young professionals, empowering them to lead. They also emphasized the importance of building a foundation for long-term planetary stewardship through youth empowerment.

The Netherlands mentioned the importance of business development and support, illustrating this point by recalling a programme launched by the Netherlands 10 years ago targeting small food producers.

China noted its continued efforts to strengthen youth participation and capacity building through international collaboration. It highlighted its commitment by referencing the AOGEO Symposium where institutionalized youth engagement is a core component of regional cooperation. It also indicated it will deepen its support for key EO Youth programmes, including the GEO Youth enabling mechanism, and GEO Youth ambassador network.

Ghana warmly welcomed the participation of youth in this year's GEO Global Forum, emphasizing that the future of GEO must be shaped by the vision and the voices of the young people. It committed to fostering a robust and inclusive Earth Intelligence community, one that begins with empowering the next generation. Ghana expressed its readiness to collaborate with GEO, to elevate youth participation across Africa to a new level.

Japan highlighted the youth session held during the AOGEO Symposium in Tokyo in September 2024. They recognized and reaffirmed the importance of promoting youth engagement as a key objective of the Post-2025 Strategy and expressed their continued support for such initiatives.

South Africa recalled the 2023 Cape Town Youth Declaration and reaffirmed its commitment to placing youth at the centre of EO efforts. It emphasized that young people are not only the leaders of tomorrow but also today's partners, innovators and changemakers —playing a vital role in addressing pressing challenges such as climate

change, biodiversity loss, and water scarcity, as well as contributing to decision-making processes.

The United States expressed its appreciation for the growing engagement of youth within GEO, including initiatives like the GEO Youth Ideathon. It encouraged further involvement of young people across all facets of GEO - within Member governments and Regional GEOs, and in collaboration with the technical communities of Participating Organizations and Associates.

Participating Organisations including the **European Association of Remote Sensing Companies (EARSC), World Data System (WDS)**, and the **Earth Observation Laboratories Network (Red LabOT)** highlighted their efforts to provide career development pathways and practical opportunities for early career professionals.

The session reaffirmed the importance of youth in advancing GEO's strategic priorities and outlined practical steps for enhancing their role across regions and sectors.

The moderator concluded the session by calling on all members and POs who wish to contribute to Youth Engagement to do so also via the new GEO Youth Community of Practice enabling mechanism, now an official activity of the GEO Work Programme.

7 STRENGTHENING PRIVATE SECTOR ENGAGEMENT TO DELIVER ON GEO'S VISION

7.1 Introductory Remarks

GEO Co-Chair, Stephen Volz, Assistant Administrator for Satellite and Information Services, National Oceanic and Atmospheric Administration, United States, opened the session by highlighting the growing engagement and strategic role of the private sector within the GEO community. He emphasized its critical contribution to achieving GEO's mission and set the stage for discussions on how public-private collaboration can drive progress toward global sustainability goals.

7.2 Keynotes

Giovanni Sylos Labini, CEO, Planetek Italia, EARSC Vice-Chairman, delivered the first keynote, highlighting Europe's strategic position in the EO sector and the global significance of Copernicus as a public good and pioneer of the free and open data model. He warned that a fragmented market, mismatched supply and demand, and a lack of stable "anchor" customers hinder scaling, and pointed to three opportunities to bolster EU leadership: the next Multiannual Financial Framework, the 2025 ESA Ministerial Conference, and the European Data Act. He urged stronger public-private partnerships, greater global competitiveness, and national capacity building. Highlighting the Italian Space Agency's IRIDE programme, he showcased how satellite data and digital tools can drive environmental and societal value and stressed linking research to operations through global alliances for a unified Earth Observation ecosystem that enhances climate resilience and public services.

Francesco Longo, Head of Earth Observation Office and Deputy Director, Engineering and Technology Directorate, Italian Space Agency, reinforced the vital role of the private sector

in achieving GEO's vision. He stressed that while strategies and policy frameworks are shaped by public institutions, it is the private sector that enables and implements these ambitions. By translating high level objectives into practical solutions and innovations, the private sector serves as a key driver in delivering real world impact.

7.3 Panel Discussion with Representatives from the Private Sector

This session explored the evolving role of the private sector in advancing GEO's vision of "Earth Intelligence for All," featuring regional insights, emerging trends, and strategies for inclusive innovation and public-private collaboration across the EO ecosystem.

The panel discussion included: Milena Lerario, CEO, e-Geos, Italy; Wang Jian, Founder, Alibaba Cloud, China; Patricia Cummens, Director of Government Strategy and Policy Solutions, Esri, United States; and Michael Breetzke, Director of Business Development, Swift Geospatial, South Africa.

Key Trends and Challenges

Panellists agreed on the rapid expansion of the space economy and the growing imperative to democratize access to EO data.

Milena Lerario (e-Geos) highlighted Italy's strategic contributions through initiatives such as IRIDE and COSMO-SkyMed, which deliver high-resolution data for disaster response and infrastructure monitoring. She emphasized the importance of skills development and public-private collaboration in supporting digital transformation.

Jian Wang (Alibaba) underscored the transformative role of AI and real-time data processing in emergency response and urban planning. He noted growing opportunities for small enterprises driven by advances in edge computing and automation.

Patricia Cummens (Esri) spoke to rising expectations for integrated, timely EO solutions. She cited GEOGLOWS and Digital Earth Africa as examples of how public-private partnerships and GEO's convening power can successfully translate research into operational services.

Michael Breetzke (Swift Geospatial) addressed both the promise and limitations of EO in Africa, pointing to gaps in digital infrastructure. He called for hybrid solutions, including offline data repositories, to ensure inclusive access across diverse contexts.

Future Directions and Collaboration

In the second round of discussion, panellists explored innovation and the evolving role of the private sector in GEO.

Michael Breetzke (Swift Geospatial) noted increasing academic interest in geospatial technologies across Africa, reflecting a new generation poised to bring innovative, locally relevant solutions to the field.

Jian Wang (Alibaba) called for a broader understanding of the private sector to include both commercial and nonprofit actors. He advocated for inclusive innovation ecosystems that empower diverse contributors.

Milena Lerario (e-Geos) emphasized the shift toward Earth Intelligence as a service, enabled by AI, machine learning and high-performance computing. She stressed the need for scalable, smart solutions that meet both public and commercial demands.

Patricia Cummens (Esri) pointed to GEO's Post-2025 Strategy Implementation Plan as a key opportunity to enhance engagement with the private sector. She encouraged a differentiated approach that recognizes the sector's diversity and fosters value-driven partnerships.

A recurring theme across the discussion was the importance of collective action. Panellists highlighted the GEO community as a strong global ecosystem capable of driving inclusive and collaborative progress in Earth Intelligence.

7.4 Industry pitch session: Innovative Earth Observation Solutions

This session featured presentations from EO downstream companies from different geographic locations, showcasing EO solutions aligned with GEO focus areas to leverage public-private partnerships.

- Tobias Leismann, Constellr, Germany;
- Mauro Manente, Latitudo40, Italy;
- Filippo Tonion, Tree, Italy;
- Jara Villanueva, AxelSpace, Japan;
- Ding Zonghua, Tianbo Electronics Information Technology, China;
- Claire Dufau, CLS Group, South Africa;
- Dexter Jagula, SkyWatch, Canada.

7.5 Interventions from the floor and concluding remarks

The session underscored GEO's pivotal role in bringing together diverse actors to realize the full potential of EO and geospatial information. Speakers emphasized that achieving the vision of Earth Intelligence for All depends on shared innovation, inclusive access, and sustained public-private cooperation. By fostering dialogue between industry leaders and the public sector, the session demonstrated the growing value of private sector engagement within the GEO community.

Panellists shared regional experiences in public-private collaboration and discussed new mechanisms to enhance GEO's engagement with industry. They expressed strong support for the Post-2025 Strategy Implementation Plan as a guiding framework for private sector involvement and highlighted the importance of strengthening participation through Regional GEOs. EuroGEO's current efforts to define a set of strategic engagement guidelines were noted as a model for advancing this agenda.

8 CLOSING CEREMONY

8.1 Review of Plenary Decisions

Session Chair and Representative of the Lead Co-Chair, Xiaohan Liao, Institute of Geographic Sciences and Natural Resources Research, China, reviewed the Plenary decisions.

8.2 Closing Remarks from the Host

Teodoro Valente, President, Italian Space Agency, expressed Italy's honour in hosting the GEO Global Forum 2025. He thanked all participants and emphasized the importance of continued international cooperation and collaboration, both now and in the future, in addressing climate change, DRR, and the development of advanced EO technologies to benefit everyday life.

8.3 Handover of GEO Lead Co-Chair from China to the European Union as represented by the European Commission

In a symbolic and forward-looking moment, the GEO Lead Co-Chair role was formally handed over from China to the European Union as represented by the European Commission. The transition marked the continuation of strong global leadership within GEO, reinforcing the spirit of international collaboration and shared commitment to advancing Earth Intelligence for All.

8.4 Closing Remarks from GEO Lead Co-Chair

Joanna Drake, Deputy Director-General, Directorate-General for Research and Innovation, European Commission, expressed heartfelt thanks for the dedication and leadership that united the GEO community. She commended the China Lead Co-Chair for their admirable guidance and reaffirmed the EU's commitment to advancing GEO's mission. Drake outlined key priorities moving forward, including strengthening Executive Committee effectiveness, enhancing governance through the Rules of Procedure, supporting implementation of the GEO Work Programme, and reinforcing GEO's value proposition on the global stage.

8.5 Closing remarks from GEO Co-Chairs

Xiang Gao, Representative of the GEO Co-Chair, China, Director-General, China Science and Technology Exchange Center, Ministry of Science and Technology, China, celebrated the successful conclusion of the GEO-20 Plenary, extended sincere thanks to all participants, and reaffirmed China's strong support for GEO's mission as it enters the new era of Earth Intelligence.

Mmboneni Muofhe, Deputy Director-General, Department of Science, Technology and Innovation, South Africa, emphasized the importance of collaboration, thanked the hosts, and highlighted the progress made, encouraging continued work toward concrete solutions; he also invited all Plenary attendees to the upcoming AfriGEO Symposium in Senegal.

Stephen Volz, Assistant Administrator for Satellite and Information Services, National Oceanic and Atmospheric Administration, United States, reflected on GEO's achievements over the past two decades, urging the community to embrace innovation, adapt to rapid change, and strengthen public-private collaboration to meet global challenges.

8.6 Closing remarks from GEO Secretariat

Yana Gevorgyan, Director of the GEO Secretariat, concluded the Plenary by presenting a video created by the young winner of GEO's 2021 Art Competition. The video expressed the artist's appreciation for the Earth and her moving call for humanity to protect the planet, capturing the spirit and purpose of GEO's mission for future generations.