

Summary of the GEO Week 2023: 6-10 November 2023

Earth observations (EO) provide a global perspective and a wealth of data about Earth systems, enabling data-informed decision making based on the current and future state of our planet. The Group on Earth Observations (GEO) comprises a voluntary partnership among governments, international and national organizations, and the private sector united by the goal of improving the availability, access, and use of such EO to ensure the sustainable use of Earth’s natural resources.

Taking the theme of ‘The Earth is talking’ seriously, the 19th session of the GEO (GEO-19) marked a turning point when GEO Members adopted the GEO Post-2025 Strategy: Earth Intelligence for All. The Strategy not only supports a continuation of GEO’s leadership in coordinating and enabling the provision and use of EO, but now introduces pathways for GEO to co-produce products and services with users and for users, thereby requiring GEO to adapt its operating model. In a display of this forward vision, GEO-19 also saw youth participants playing a more central role in the discussions and emphasized their integral role in data-driven economies.

Other highlights during GEO-19 included:

- the launch of the [new GEO website](#), which aims to: increase brand-awareness and credibility; provide clearer information and the ability to generate leads; allow for better engagement with target audiences; and improve user-experience and accessibility;
- the introduction of the [Global Ecosystems Atlas](#) and the [Global Heat Resilience Service](#), two major programmatic efforts that GEO has been leading since GEO-18 and that, in GEO’s words, presents “proof of concept for the Post-2025 Strategy;”
- a first-ever session where GEO Week officially engaged with young people on the dais in a “defining moment for GEO” to explain how Earth intelligence will benefit the leaders of tomorrow, during which youth presented the [Youth Declaration](#); and
- a session on the second day dedicated to showcase GEO achievements from the Team Impact category of the 2023 GEO Awards, with selected stories from the [2023 Highlights Report](#).

The final day of GEO Week 2023 was dedicated to the Ministerial Summit, during which the leaders of governments reaffirmed the GEO commitment to open and free data exchange, encouraged governments to increase free access to EO using

public resources, and strongly encouraged flexible, multi-user licensing agreements for non-governmental data. A [Ministerial Declaration](#) was adopted, which, among others: affirms GEO’s commitment to support multilateral environmental agreements; strongly encourages flexible, multi-user licensing agreements for non-governmental data; and charges GEO with developing an implementation plan to guide progress in executing the Post-2025 Strategy and with mobilizing resources.

GEO Week 2023 was held in Cape Town, South Africa, from 6-10 November 2023. This summary covers the GEO-19 Plenary on 8-9 November and the Ministerial Summit on 10 November.

In This Issue

A Brief History of GEO Week	2
GEO Week 2023 Report	2
Opening Session	2
Post-2025 Strategy	3
Ministerial Declaration	4
Igniting Action – the GEO Global Ecosystems Atlas ..	4
Driving Collaboration for Early Warnings for All: the GEO Global Heat Resilience Service	5
A Showcase of GEO Achievements Drawing from the Team Impact Category of the 2023 GEO Awards, with Selected Stories from the 2023 Highlights Report.	5
Bridging the Gap: GEO’s Coordinated Approach to National and Global Engagements	6
Launch of the New GEO Website	6
The Way Ahead: Plenary Business and Decisions	7
Report of the 2023 Ministerial Summit	8
Opening Session	8
Post-2025 Strategy	8
Declaration Approval and Implementation	9
Upcoming Meetings	11
Glossary	11

A Brief History of GEO Week

GEO promotes open, coordinated, and sustained data sharing and infrastructure for better research, policy, decision making and action across many disciplines. The GEO community focuses on global priority engagement areas, including the UN 2030 Agenda for Sustainable Development, the Paris Agreement on climate change, and the Sendai Framework for Disaster Risk Reduction. The GEO community has also been building the [Global Earth Observation System of Systems \(GEOSS\)](#), a set of coordinated, independent EO, information, and processing systems that interact and provide access to diverse information for a broad range of users in both the public and private sectors. GEO was established during the Third Earth Observation Summit, which took place on 16 February 2005 in Brussels, Belgium. In a resolution, delegations from almost 60 countries endorsed the 2005-2015 GEOSS 10-Year Implementation Plan and established the intergovernmental GEO to implement it.

GEO's governance structure consists of: the Plenary, GEO's primary decision-making body that meets annually; the Executive Committee, which guides GEO; and the GEO Programme Board, which guides the GEO Work Programme. The GEO Secretariat, based in Geneva, Switzerland, executes GEO's decisions and supports the work of the GEO community. The GEO Plenary has been meeting annually since 2005.

GEO Members include the European Commission and any UN Member State that formally endorses the [GEO Strategic Plan 2016-2025: Implementing GEOSS](#). Participating Organizations are intergovernmental, international, and regional organizations with a mandate in EO or related activities who have formally endorsed the GEOSS 10-Year Implementation Plan and been approved by the GEO Plenary. GEO Associates are commercial organizations and national associations of commercial firms, as well as non-governmental, not-for-profit, and civil society organizations with EO-related mandates. With further approvals at GEO-19, GEO now consists of 115 Members, 153 Participating Organizations, and 19 Associates.

GEO Week 2021, which, due to the COVID-19 pandemic, took place online, from 22-26 November 2021, and included GEO-17. The meeting focused on the efforts necessary to accelerate action in GEO towards positive environmental and social impact. The Plenary considered the results of the Mid-Term Evaluation of GEO with its findings and recommendations underpinning strategies for the evolution of the GEO Work Programme and engagement activities. The GEO Plenary also approved a fourth engagement priority, on "Resilient Cities and Human Settlements," driven by the New Urban Agenda (NUA). Through this priority, GEO will support the use of EO in implementing the NUA and continued work on Sustainable Development Goal (SDG) 11 (sustainable cities and communities).

GEO Week 2022 convened in Accra, Ghana, from 31 October – 4 November under the theme, "Global Action for Local Impact," bringing together practitioners to discuss the potential for EO to assist in addressing global challenges. GEO-18, which addressed efforts needed to accelerate action in GEO towards environmental and social impact, was heavily focused on the future direction of GEO, with participants engaging in sessions



Lead GEO Co-Chair **Mmboneni Muofhe**, Deputy Director General, Department of Science and Innovation, South Africa

related to the road to GEO post-2025. GEO Week 2022 also hosted the sixth AfriGEO Symposium, which convened over two days prior to GEO-18.

GEO Week 2023 Report

Opening Session

The opening session on Wednesday, 8 November, was moderated by Ayanda Allie, South African journalist and news anchor.

Lead GEO Co-Chair Mmboneni Muofhe, Deputy Director General, Department of Science and Innovation, South Africa, welcomed participants to GEO-19. Saying that the "Earth is talking to us," through, *inter alia*, biodiversity loss and extreme events everywhere, he stressed that the outcome of not listening will be devastating, and emphasized the role of citizen science to ensure the participation of all citizens.

Buti Manamela, Deputy Minister of Higher Education, Science and Innovation, South Africa, drew attention to how GEO has changed since the meeting in Canberra, Australia, in 2019, having "truly grown in international representation and accessibility." He highlighted the strengthened voices of small island states, the expanded role of the private sector and small



Jing Zhao, Director General, National Remote Sensing Center, China

and medium enterprises, and the participation of young people, adding that the GEO system was created precisely to foster access and collaboration,

GEO Co-Chair Jing Zhao, Director General, National Remote Sensing Center, China, expressed her country's willingness to collaborate with all partners in the GEO community. She described, in particular, African experiences through a China-Africa center through which high-resolution imagery is shared with 23 African countries. She further elaborated on the open sharing of multi-spectral data towards the world's first remote sensing atlas, which covers 147 cities in 105 countries and provides data sets of forest cover and Antarctic ice cover through joint global ecosystem observation and research cooperation.

GEO Co-Chair Joanna Drake, Deputy Director-General, Directorate-General for Research and Innovation, European Commission, noted that current disturbing events can cause the world to drift apart and expressed her gratitude "to be among friends" since the GEO community is a forum for peaceful collaboration. Describing the GEO community's values of free and open access to all people as an important ingredient towards achieving sustainable development, she highlighted the EU's Copernicus system as an integral tool in the GEO toolkit.

GEO Co-Chair Richard Spinrad, National Oceanic and Atmospheric Administration (NOAA) Administrator, US, said GEO-19 provides the opportunity to take the lofty objectives captured in the GEO Post-2025 Strategy and bring them into action. He described the [BioSCape](#) collaboration between the US and South Africa's University of Cape Town as an example of empowering local communities to literally save lives and for governments and entities to meet national and international treaties' obligations.

Yana Gevorgyan, Director, GEO Secretariat, highlighted how far GEO has come since the original vision was adopted in 2005, especially regarding data sharing and putting people on the map so resources are made available to them. Looking forward, she drew attention to new programmes, including the Global Ecosystem Atlas and the Global Heat Resilience Service. She asked GEO principals to commit politically and financially to turn the GEO vision into an actionable and implementable reality.

Approval of the Agenda and the Draft GEO-18 Report: The agenda, found in [Document GEO-19-1.2\(Rev3\)](#) and the draft report of GEO-18 ([Document GEO-19-3](#)) were approved without comment. .

Welcoming New GEO Members and Participating Organizations: Lead GEO Co-Chair Muofhe welcomed Trinidad and Tobago as a new member of GEO, noting this brings the total number of GEO members to 115 (114 Countries and the European Commission). TRINIDAD AND TOBAGO expressed their appreciation for GEO's work and her country's commitment to its Post-2025 Strategy. She called for greater access to high-resolution satellite imagery, highlighted the importance of including marine areas in the new Global Ecosystem Atlas, and stressed the need to address land-based marine pollution.

The Plenary also welcomed eight new Participating Organizations, bringing the total to 153. These are: Health Solutions Research Inc.; Eratosthenes Centre of Excellence; New

World Hope Organisation; UbuntuNet Alliance for Research and Networking; Jokkolabs Banjul; Research Centre of Big Data for Sustainable Development Goals; Asia Pacific Space Cooperation Organisation; and International Union for Conservation of Nature (IUCN) ([Document GEO-19-Info-1.4](#)).

Post-2025 Strategy

In a session on Wednesday on the [GEO Post-2025 Strategy](#), Alejandro Román, Paraguay Space Agency, and Samantha Burgess, European Centre for Medium-range Weather Forecasts (ECMWF), Post-2025 Working Group Co-Chairs, opened with reflections on the year-long process that formulated the Strategy.

Burgess noted the Strategy seeks to inspire and guide the work of the GEO community beyond 2025, while reaffirming its commitment to full and open access to EO data, knowledge and products, and the co-development of services that empower environmental decisions, enable economic opportunities, and promote good governance. Burgess highlighted two new commitments introduced in the Post-2025 Strategy: to pursue global equity in EO, making resources and opportunities available to communities with varying needs and capacities; and to provide not only EO but also "Earth intelligence."

Román shared how this new strategy intends to build on GEO's strengths, expertise, and global network to address the complex issues facing our planet through a unified approach. Reflecting on these attributes and deliberations with the GEO community, Burgess discussed how the Post-2025 Strategy provides a vision for GEO in which "trusted Earth intelligence is universally accessible and empowers society to achieve a sustainable future," and how the strategy identifies GEO's mission to "co-produce user-driven Earth intelligence solutions by leveraging its unique position."

Sofia Drozd, National Technical University, Ukraine, emphasized the importance of engaging young people given their fresh view on global problems and acceptance of scientific progress. She stressed the need for skills development and online translation tools to ensure wide access.

Maree Wilson, Space Division, Geoscience Australia, said the fact that the Post-2025 Strategy was developed jointly by the community was "most inspiring." She welcomed the strategy's openness, referred to work with territories in her region on data



Alejandro Román, General Director of Aerospace Development, Paraguay Space Agency

access, and reassured the Plenary of Australia's commitment to the Strategy and to data sharing.

Titus Letaapo, Sarara Foundation, Kenya, noted that while Indigenous Peoples are caretakers of up to 80% of the world's biodiversity, their value is often overlooked. Regarding GEO's Post-2025 Strategy, he stressed: the role of the GEO Indigenous Alliance; the need to address the potential misuse of data; the importance of free, prior, and informed consent procedures; and recognition of the UN Declaration on the Rights of Indigenous Peoples.

Emmanuel Pajot, European Association of Remote Sensing Companies, said the concept of Earth intelligence allows for a change of focus and introduces co-designed instrument tools that all users can benefit from. He highlighted the strength of each member of the GEO community and emphasized the private sector, which contributed to new methodologies and opening access to opportunities for all actors.

Andiswa Mlisa, Pacific Community, welcomed the strategy's potential for global transformation, emphasizing the critical role of integrating new technologies and innovations to overcome the challenges facing the Pacific community. She further highlighted the Strategy's recognition of new funding mechanisms and opportunities, which are needed to implement change.

In a round of responses from the floor, GHANA characterized the Post-2025 Strategy as "a movement for jobs" and called for its presence "on a daily basis, to see GEO in everything we do."

GERMANY emphasized continuity of successful initiatives and open data from public institutions.

Noting that working with Indigenous Peoples had been an empowering experience for his country, FINLAND said it was key to start from their point of view. FRANCE welcomed the Post-2025 Strategy and its objectives, highlighting its focus on inclusiveness and openness.

The UK described the Post-2025 Strategy as "intelligent, equitable and inspiring," with a diversity that uniquely enables GEO to address the incredible range of challenges that EO can help resolve. The US welcomed the Strategy as a tool that will provide Earth intelligence and improve equity towards the most vulnerable, and called for amplifying the voices of Indigenous communities and merging Indigenous and western knowledge systems.

Emphasizing the development of new technologies at a time when the world is heading into the Global Stocktake to assess implementation of and move the needle on the Paris Agreement, the UNFCCC called for sharing these technologies with the most vulnerable countries.

JAPAN shared its own efforts to implement the principles of GEO's vision, and stated its commitment to work collaboratively with GEO on this new Strategy.

CHINA expressed gratitude to the GEO Post-2025 Working Group and embraced the adoption of the Strategy. ITALY committed to supporting achievement of the Strategy's goals, emphasizing the need for evidence-based decision making.

SOUTH AFRICA shared excitement for the inclusive aspect of the Strategy, highlighting the need for EO data to impact those in remote areas who are disproportionately feeling the impact of climate change.



Lawrence Friedl, Director of Applied Sciences Program, National Aeronautics and Space Administration, US

SENEGAL, NIGERIA, and MEXICO reaffirmed their commitment to international cooperation in EO, congratulated all those involved in shaping the GEO Post-2025 Strategy, and noted how it is mobilizing data to address biodiversity loss and climate change.

The UN CONVENTION TO COMBAT DESERTIFICATION (UNCCD) highlighted its Land Degradation Neutrality flagship initiative as a most welcome addition to addressing land degradation, and stressed the importance of the GEO Indigenous Alliance in bringing all Indigenous voices to the table.

The CENTER FOR ENVIRONMENT AND DEVELOPMENT FOR THE ARAB REGION AND EUROPE noted efforts on digital training in Africa and EO work related to assessing the effect of dust in the use of solar energy.

The WORLD GEOSPATIAL INDUSTRY COUNCIL (WGIC) welcomed the GEO Post-2025 Strategy, particularly its focus on greater engagement of the EO commercial sector.

GEO-19 then adopted the GEO Post-2025 Strategy ([Document GEO-19-2.1](#)).

Ministerial Declaration

On Wednesday, the Co-Chairs of the Ministerial Working Group who presented the Ministerial Declaration and Ministerial Summit agenda to the GEO community ([Document GEO-19-Info-3.1.a\(Rev1\)](#)). Yasuko Kasai, Committee on Space Research, thanked the working team, which included Cambodia, South Africa, Senegal, China, Japan, the European Commission, France, the UK, the US, and Canada.

Lawrence Friedl, National Aeronautics and Space Administration, US, provided highlights from the Declaration, including an emphasis on the inter-connected nature of the challenges, endorsement the GEO Post-2025 Strategy, underscoring its inclusivity, and reflection on which commitments and actions to take. The Declaration will be presented to ministers for adoption during the Ministerial Summit.

Igniting Action – the GEO Global Ecosystems Atlas

This session, moderated on Wednesday by Marco Lambertini, World Wide Fund for Nature, introduced the [Global Ecosystems Atlas \(Document GEO-19-Info-4.1\)](#), one of two major

programmatic efforts that GEO has been leading since GEO-18 and that, in GEO's words, presents "proof of concept for the Post-2025 Strategy."

Lambertini provided an overview of the Atlas's purpose, real-world applications, and user perspectives, noting that measuring progress is vital to any commitment. He explained that the Atlas will be an open, user-friendly, online resource bringing together high-quality ecosystems data in a single place and will help in monitoring and reporting under environmental agreements.

Panelists variously described the Atlas as: "one system speaking one language;" a "heart-rate monitor of the life-support system;" a harmonizing tool which effectively measures our conservation progress; and a key tool to monitor, measure, and manage our biodiversity commitments.

Ahmed Raidh, Ministry of Environment, Climate Change and Technology, Maldives, drew attention to the Atlas' usefulness and the need to measure efforts undertaken by the Maldives, establish baselines, identify key areas requiring special attention, and adapt actions as needed.

Andrew Skowno, South African National Biodiversity Institute, stressed the importance of ecosystem-level thinking. He underscored that iteration and collaboration are key, allowing for blending bottom-up and top-down approaches.

Miriam Grigg, Department for Science, Innovation and Technology, UK, elaborated on the need for greater integration of ecosystem data internationally and the Atlas's potential to better monitor and direct UK Aid funding. She announced the UK's provision of USD 180,000 towards the Atlas.

Jixi Gao, Satellite Application Center for Ecology and Environment, Ministry of Ecology and Environment, China, emphasized biodiversity monitoring as a basis for long-term understanding and the Atlas's role in monitoring human activities and their impact.

Joanna Drake, European Commission, called for collaboration and making use of existing initiatives, including those under the European Commission's Horizon Europe and Joint Research Center.

Driving Collaboration for Early Warnings for All: the GEO Global Heat Resilience Service

On Wednesday, Johan Stander, World Meteorological Organization (WMO), underscored the importance of data-driven early warning systems to ensure we are protected from extreme weather events. Stander noted these systems require a global network of infrastructure which is not yet in place as only half of the world is covered by early warning systems.

Detailing the impacts of extreme heat, Juli Trtanj, Global Heat Health Information Network, stated that half a million people die every year from heat. Trtanj further discussed how heat not only leads to death, but also exacerbates issues related to air quality, food security, civil unrest, and physical and mental health. Trtanj then showcased the [Global Heat Resilience Service](#), a tool used to provide urban areas with data on health risks from exposure to heat.

Geordin Hill-Lewis, Deputy Mayor of Cape Town, South Africa, provided examples of the economic, environmental, and social impacts of heat in Cape Town, noting the most vulnerable

populations disproportionately experience the impacts. Hill-Lewis highlighted the city's work creating public green spaces and providing education and awareness-raising programmes.

Jessica Kavonic, C40 Cities, highlighted her organization's work in addressing extreme heat, which includes [C40's Cool Cities Network](#) as well as assisting cities with the development and implementation of plans to address heat. Kavonic further noted multiple constraints, including the difficulty of quantifying the impact of heat and the rapid rate of urbanization.

Lennox Gladden, UNFCCC, stressed the importance of leaving no one behind when it comes to addressing the impacts of heat. He noted that while the appetite to address the problem exists, it requires strong partnerships and greater access to data to inform evidence-based decision making.

Responding to the panelists, numerous participants highlighted the importance of early warning systems and provided examples of both the impacts of and responses to extreme heat. Others underscored persistent challenges despite the presence of data, including ensuring data reaches the intended communities and depoliticizing the issue.

A Showcase of GEO Achievements Drawing from the Team Impact Category of the 2023 GEO Awards, with Selected Stories from the 2023 Highlights Report

The second day of the GEO-19 plenary opened with a session showcasing GEO achievements and selected stories from the [2023 Highlight Report](#).

Moderated by Carrie Stokes, US Agency for International Development, the session kicked-off with a video presentation highlighting global efforts and applications of GEO programmes and initiatives in 2023.

Ian Jarvis, [GEO Global Agricultural Monitoring \(GEOGLAM\)](#), discussed the historical impact of GEOGLAM's work in crop monitoring and forecasting, while underscoring the importance of independent, timely, and consensus-based information and the role it plays as a trusted and authoritative source of data.

Lillian Diarra, [GEO Blue Planet](#), shared her initiative's three core action areas: stakeholder engagement, co-designing fit-for-purpose tools, and capacity development to ensure long-term



Ian Jarvis, GEOGLAM, responding to comments from participants during the GEO achievement awards

use of data. Diarra cited the [Sargassum Information Hub](#), which provides early warnings for the monitoring and management of sargassum blooms, and the [Integrated Marine Debris Observing System](#), which strengthens coordination and collaboration to reduce beach debris.

Wenjiang Huang, [Global Vegetation Pest and Disease Dynamic Remote Sensing Monitoring and Forecasting \(GEO-PDRS\)](#), said GEO-PDRS is a multi-source tool for use at the global, regional, and local levels. He said it combines EO, habitat monitoring, hotspot analysis, risk prediction, and time-series forecasting for 19 major vegetation pests and diseases, in a way that enables improved accuracy of monitoring and forecasting and leads to reduced chemical pesticides use, enhancing food security and biodiversity.

Angélica Gutiérrez, [GEO Global Water Sustainability \(GEOGloWS\)](#), US, elaborated on GEOGloWS, a free and open-service, global hydrological forecasting tool. She explained that it represented a paradigm change, given its more collaborative and cost-effective approach and ability to enhance local efforts on disaster risk reduction, providing 15-day forecasts on rivers often short of data. She mentioned various instances where GEOGloWS has resulted in reducing human casualties and impacts, allowing early evacuation before extreme weather events, better reservoir management, and water-quality forecasts.

Amos Kabo-Bah, [GEO Land Degradation Neutrality initiative \(GEO-LDN\)](#), highlighted GEO-LDN's role in supporting over 40 countries and 59 teams working with geospatial data. He emphasized the importance of translation, stressed gender as a crucial element to take into account, and pointed to the usefulness of online forums and monthly seminars.

Aya Takatsuki, Data Integration and Analysis System (DIAS), described the role of DIAS in improving disaster preparedness and response as a flood early warning system in the Typhoon Noru project. As enablers, she highlighted: the flexibility of DIAS partners to co-develop a data integration and analysis system; having a national coordination scheme; and years of training of practitioners and decision-makers facing typhoons and floods.

In interventions from the floor, SOUTH AFRICA challenged panelists to expand on the administrative lessons learnt, while SENEGAL pointed out the cross-programme connections between GEO initiatives. ECUADOR and MEXICO provided examples of applied geo-spatial data, while INDIA noted concerns about declining coastal water quality.

Bridging the Gap: GEO's Coordinated Approach to National and Global Engagements

Moderated by Yuqi Bai, Tsinghua University, China, this session on Thursday convened panelists to discuss the challenges and opportunities faced by national GEOs, who will play a crucial role in implementing the GEO Post-2025 Strategy.

Ernest Acheampong, GEO Secretariat, discussed common qualities among successful national GEOs, including clear mandates, well-defined objectives and goals, and annual strategies or plans. Advocating for more national GEOs, Acheampong introduced National Coordination Mechanisms as a non-binding framework to promote institutional synergies and enhance coordination and shared understanding of values to drive action.

Speaking about her country, Trinidad and Tobago, Rahanna Juman, Institute of Marine Affairs, noted they were the newest member of GEO, joining in September 2023. Representing a national GEO office in its infancy, Juman underscored the importance of data to address contextually sensitive environmental issues, while highlighting her organization's attributes which position it to be well-suited to lead the national GEO office.

Marilyn Calvo Méndez, National Meteorological Institute, Costa Rica, presented on AmeriGEO, a regional GEO event, which resulted in an ideal platform to raise awareness and exchange experiences on EO, eventually facilitating national GEO coordination in Costa Rica. She stressed inter-institutional collaboration as fundamental and the unifying role of a common topic of interest.

Evangelos Gerasopoulos, Greek GEO Office, shared the Greek experience in the creation of a coordination mechanism at the national level. He highlighted work around specific priorities, such as urban resilience, climate change impacts on cultural heritage and adaptation, and the importance of local leadership in bringing partners from different sectors together.

Shannon Kaya, Environment and Climate Change Canada, Canada, presented on building the Canadian national GEO secretariat. She said it had been a small investment in resources but large in benefits and urged members not to be intimidated by the term "secretariat" as it could be as small and simple as a one-person secretariat.

Interventions from Members included: the need to reduce duplication between multiple departments and national structures by integrating data collection and information; the importance of pooling resources and information through coordination mechanisms such as national GEO offices; and calls to governments to invest in establishing properly functioning and well-resourced national GEO offices that multiple agencies and departments can benefit from.

Launch of the New GEO Website

Nicoleta Panta, GEO Secretariat, introduced the [new public-facing GEO website](#) on Thursday, explaining its aim to: increase brand-awareness and credibility; provide clearer information and the ability to generate leads; allow for better engagement with target audiences; and improve user experience and accessibility.



Hendrik Baeyens and Nicoleta Panta, GEO Secretariat, announce the launch of the new GEO website

Providing a walk-through of the website, Hendrik Baeyens, GEO Secretariat, described the website's focus on: promoting community building; an improved multi-service device support; a consistent look and feel; easier navigation; and a powerful search function.

The Way Ahead: Plenary Business and Decisions

Foundational Tasks of the GEO Work Programme

2023-2025: Anthony Milne, Co-Chair, GEO Programme Board, presented the GEO Work Programme for 2023-2025 ([Document 19-8.2](#)) on Thursday. Among changes from the former Work Programme, Milne highlighted the shift from 24 to 16 foundation task activities, as a result of integrating activities, which fall under three foundation tasks: GEO Work Programme Coordination; GEO Engagement Priorities Coordination and Integration; and Data and Knowledge Management.

Following the presentation of the GEO Work Programme for 2023-2025, delegates provided interventions, with JAPAN offering support specifically to the foundational task of Data and Knowledge Management. The SUSTAINABLE DEVELOPMENT SOLUTIONS NETWORK expressed concerns that the Work Programme did not go far enough in acknowledging the 2030 Agenda for Sustainable Development. CHINA, ITALY, the EUROPEAN COMMISSION, and others expressed gratitude for the Work Programme. Delegates then approved the Work Programme for 2023-2025.

Programme Board Members for 2024: Wenbo Chu, GEO Secretariat, presented the 2024 Board Members ([Document GEO-19-8.3](#)), noting the required total of 32 seats for Members and Participating Organizations. Saying that 14 seats will become vacant for 2024, she announced that the Secretariat had received 16 nominations for 2024, of which three were new nominations, namely El Salvador, India, and Paraguay. GEO-19 approved the 2024 slate of Programme Board Members.

Executive Committee Members for 2024: Erika Alex, GEO Secretariat, presented the members nominated by the regional caucuses to serve as the Executive Committee for 2024 ([Document GEO-19-8.4](#)). The members were approved as presented.

2022 Financial Statements and Audit Report: In a recorded video, Brian Cover, Chief of Finance, WMO, presented the 2022 Financial Statements, 2022 Audit Report ([Document GEO-19-Info-8.5](#)), and notes looking forward to 2023 and beyond. Cover highlighted the impacts of reduced COVID-19 restrictions on revenues and expenditures, noting GEO is in a good financial position.

2024 GEO Secretariat Trust Fund Budget and Pledges:

Chen Miao, GEO Budget Working Group Representative, presented the 2024 GEO Secretariat Trust Fund Budget and Pledges ([Document GEO-19-8.6\(Rev1\)](#)), noting that the total amount of CHF 5,031 million (cash and in-kind) operational budget will support GEO work and activities in 2024. She presented the 2023 income and expenditure figures, confirming that by the end of 2023, expected expenditures will amount to CHF 4,779 million.

CHINA, the US, and AUSTRALIA pledged to continue their contributions to the Trust Fund, with AUSTRALIA pointing

to opportunities to fund specific activities. SOUTH AFRICA also pledged to continue its contributions and financial support to AfriGEO in Nairobi and its ongoing contribution of ZAR 2 million.

SWEDEN pledged CHF 110,000 to continue supporting the Trust Fund, but cautioned against duplicating efforts, mentioning links between GEO incubators on biodiversity and health and other initiatives such as the Copernicus health app.

JAPAN announced its intention to contribute to the Trust Fund as soon as possible in 2024.

Review of Plenary Outcomes: Madeeha Bajwa, GEO Secretariat, presented outcomes of the GEO-19 sessions, including brief overviews of session topics as well as general feedback received during interventions.

Handover of Lead Co-Chair from South Africa to China: Extolling the importance of teamwork, GEO Lead Co-Chair Muofhe expressed thanks to the Executive Committee, the GEO Secretariat and everyone for their support. Muofhe then handed over chairmanship to China "with full confidence that the race will continue."

Guangjun Zhang, Vice Minister of Science and Technology, China, saying that China is acutely aware of the importance of technology to social and economic development and that "no one should be left behind," underscored China's commitment to work together to build capacities driven by need, with a particular focus on developing countries.

Joanna Drake highlighted the substantive, rich, and engaging nature of GEO-19. She underscored the need to listen to stakeholders and be prepared to co-design implementation plans that don't underestimate the resources needed.

Saying that GEO-19 had been "remarkable" in its progress, success, and impact, Richard Spinrad, pointed to what he said were extraordinary examples of localized benefits from GEO's global work, including in disaster risk reduction, policy advice for adaptation, and other impactful programmes, policies, and practices.

In thanking her team, the co-chairs, and the Executive Committee, Yana Gevorgyan, reflected on how much GEO Week



Yana Gevorgyan, Director, GEO Secretariat



Guangjun Zhang, Vice Minister of Science and Technology, China, taking over the GEO Co-Chairmanship from South Africa's Lead GEO Co-Chair **Mmboneni Muofhe**, Department of Science and Innovation

has changed and grown since beginning as a two-day event in Mexico in 2015. Looking forward, Gevorgyan invited delegates to “continue the conversation” in April of 2025 during the next Ministerial Summit, and welcomed expressions of interest for hosting the event.

Report of the 2023 Ministerial Summit

Opening Session

Welcome by South Africa Host Minister: On Friday, 10 November, the final day of GEO Week 2023 started with a welcome by Blade Nzimande, Minister of Higher Education, Science and Technology, South Africa, who highlighted efforts being undertaken by South Africa’s national GEO and the regional AfriGEO. He emphasized the role of African youth in developing EO data services and products, stating “when we give young people tools to be creative, they will proactively take the future into their own hands.”

Opening Statements by GEO Co-Chair Ministers: Vice-Minister Guangjun Zhang spoke on GEO’s significant progress since 2019 in its vision of open-knowledge, clarified mandate and priority engagement areas, strengthened cooperation, and inclusiveness, stressing the consistency of this vision with China’s approach to science and technology cooperation. He presented China’s proposals going forward, including to: actively promote connectivity of EO infrastructure, accelerating the process linking the global and national to the regional scale; and enhance efforts to guarantee the smooth flow of geo-spatial information, open access to EO, and related scientific data.

Richard Spinrad, underscoring that the Ministerial Summit will lay down the foundation for implementing the Post-2025 Strategy through the Ministerial Declaration, said the Strategy will leverage appropriate tools and information for use by decision makers with a focus on providing Earth intelligence for all.

Pencho Garrido Ruiz, Acting Head of Delegation of the European Union to South Africa, elaborated on the GEO Week theme of “The Earth Talks,” stating that “what we are hearing

is that our way of living is not sustainable and is leading to increased frequency and impact of natural disasters.”

GEO Progress and Achievements Since the Last

Ministerial Summit: Lead GEO Co-Chair Mmboneni Muofhe presented on GEO’s achievements and notable activities since the 2019 Summit in Canberra, Australia, which he said had been all the more remarkable since the COVID-19 disruption meant that most of it was done in only one year. He highlighted work on urban settlements and on land degradation, and noted numerous community activities, GEO coordination mechanisms with national and regional GEOs, and development of the Post-2025 Strategy. A video presentation further summarized these achievements.

Tidiane Ouattara, Coordinator of the Africa Outer Space Programme, on behalf of Mohamed Belhocine, Commissioner for Education, Science, Technology and Innovation, African Union Commission, updated Summit participants on the “African space observations journey.” He urged participants to “listen to what the Earth is saying” with regards to climate change and other human-made disasters, as they are contributing to a disastrous decline in agricultural productivity and the ability to achieve our full potential.

Post-2025 Strategy

Discussion on the Post-2025 Strategy: Earth Intelligence

For All: Yana Gevorgyan recalled that GEO created the current default policy to share Earth data freely and openly. She noted the Strategy’s mission to: create and curate demand-driven services and operations; ensure youth, civil society, and private sector involvement becomes part of GEO’s mainstream work; and evolve GEO’s operating model and governance to “walk the talk” of being participatory and inclusive and, thus, continue to be a neutral, trusted broker and convener of partnerships around the world.

Marco Lambertini, WWF Special Envoy, underscored the need to focus on the transition towards sustainable practices and GEO’s fundamental role therein, measuring progress and holding ourselves accountable. He called for political and financial support to embrace this turning point.

Yuko Nagano, Ministry of Education, Culture, Sports, Science and Technology, Japan, welcomed the Post-2025 Strategy, in particular its refining of the mission to deliver Earth intelligence and the integration of different sources of information, projections, and scenarios, which, she said, is key to tackle interconnected challenges.

Isabelle Bénézet, Copernicus Inter-ministerial Coordination, Ministry for Higher Education, Research and Innovation, France, shared experiences from the EU’s Copernicus model and France’s work supporting forest initiatives, highlighting its One Forest Vision, measuring the net carbon sequestration balance, and mapping the most vital carbon and biodiversity reserves.

David Harper, Environment and Climate Change Canada, spoke about the impacts of extreme events in his country and the crucial importance of EO to address them. He reported that Canada unveiled its first EO strategy in 2022 to guide it over the next 15 years, noting its whole-of-society approach, and Canada’s

substantial investments in EO and Earth intelligence to support decision making, including regarding forecasting wildfires.

Closing the Data Divide: Increasing Equity and Inclusion in Earth Observations: This session, moderated by Richard Spinrad, US NOAA, convened panelists to discuss existing and future challenges and opportunities for data equity and inclusion.

Noting the unprecedented challenges facing the world today, Guangjun Zhang emphasized the need to reduce the digital divide between developed and developing countries and to join hands to promote a connective and adoptive digital era.

Tegan Brink, Australian High Commissioner for South Africa, stated that the digital divide is characterized by a lack of access to data, capacity to process data, and awareness about the benefits of data. Brink highlighted the difficulties in processing and analyzing data in the absence of digital capacity.

Mmboneni Muofhe, speaking on behalf of Mmamoloko Kubayi, Minister of Human Settlements, South Africa, stressed the importance of making sure that in the “data hungry and data intensive world we live,” the development of data does not “leap-frog” developing countries and called for greater access to digital education to build capacity.

Speaking to the capacity of using data, Cheikh Mbow, Directeur Général du Centre de Suivi Ecologique, Senegal, referred to access to data as akin to having the ingredients, but having access to data software as having the recipe. Mbow also noted concerns around data ethics, mentioning how data has historically been taken from Africa and used to benefit the north for reports and publications.

Concluding the session, Vhalinavho Khavhagali, IUCN, discussed how the GEO community can benefit from traditional knowledge, and noted the need for data to be co-designed, co-created, and co-owned by local communities. Khavhagali said the IUCN is willing to mobilize its network of partners to work together in support of the new GEO Strategy.

Youth Panel: Joanna Drake, in a first-ever session where GEO Week officially engaged with young people on the dais, invited youth representatives in a “defining moment for GEO” to explain how Earth intelligence will benefit the leaders of tomorrow.

Before moderator Brilliant Mashao engaged the group of mainly African youth in a rapid question-and-answer session, he presented the [Youth Declaration](#) to Ministerial Summit participants.

Yipei Gong referred to the theme of Earth talking, saying it is no longer whispering but screaming amid an increase in extreme events, climate change, food insecurity, and manmade disasters, which lead to conflicts and human displacement.

On why ministers and delegates should care about youth, Trevor Modise noted that while many mechanisms have been attempted, they fail because stakeholders are not collaborating effectively.

Nasiphi Ngcoliso, referring to the private sector and industries with access to the best technologies and machine-learning capabilities, reminded the audience that many African universities still lack access to the most basic technologies, like laptops.

Keneilwe Hlahane noted that GEO acts as a platform for communities of practice and urged its support in creating one for youth, so young people can raise awareness about the important role of Earth intelligence in responding to floods, land degradation, and food insecurity.

Sofia Drozd stressed the importance of financial support from private companies and appropriate legal frameworks that consider the needs of young people. She underscored that academic institutions must ensure youth have better opportunities to acquire the necessary theoretical and practical skills, and industry must help youth gain practical work experience.

Declaration Approval and Implementation

Endorsement of the Declaration: On behalf of Minister Nzimande, Phil Mjwara, Director-General, Department of Higher Education, Science and Technology, moderated the session.

Amina J. Mohammed, UN Deputy Secretary-General and Chair of the UN Sustainable Development Group, emphasized that collecting data, though important, is not enough if it does not lead to action and is not translated into information that everyone can access and use. Commending the GEO community for its commitment to provide the type of information that leads to transformative action on the ground, she confirmed the UN’s commitment to continue to support and work with GEO.

Mmboneni Muofhe, noting the Ministerial Declaration is the fruit of many months of work, said GEO Week is presenting a balanced, well-thought through, and well-consulted Declaration that provides a strong foundation for work over the next decade, with its objectives as pillars that will probably outlive the next couple of years.

Humbulani Mudau, CEO, South Africa National Space Agency, presented the text of the Ministerial Declaration and thanked the Working Group for its dedication and commitment to compile the draft text. The 2023 Ministerial Summit then adopted the [Ministerial Declaration](#), which, among other things:

- recognizes the interconnected nature of the challenges we face and the need for solutions that integrate knowledge from interlinked human and natural systems;
- recognizes that barriers to access and use EO persist and are not limited to geography, and that increasing equity and inclusivity are critical;



Humbulani Mudau, CEO, South African National Space Agency (SANSA), South Africa

- endorses the GEO Post-2025 Strategy: Earth Intelligence for All, which introduces pathways for GEO to co-produce products and services with and for users, thus requiring GEO to adapt its operating model;
- praises the adoption of the GEO Statement on Equality, Diversity, and Inclusion;
- reaffirms its commitment to open and free data exchange, encourages governments to increase free access to EO created using public resources, and strongly encourages flexible, multi-user licensing agreements for nongovernmental data; and
- call for steps to amplify the voices of Indigenous Peoples, youth, women, and other groups.

Tanja Werheit, Consul General of Germany from the Federal Ministry of Foreign Affairs, noted Germany's continued support for GEO since its inception, and commended GEO's commitment to providing free and accessible information which became the foundation for remarkable achievements.

Tegan Brink, calling the Ministerial Declaration ambitious yet essential to ensure holistic and realistic actions are undertaken, reiterated that "we cannot manage what we cannot measure" and emphasized that Earth intelligence will accelerate actions and create opportunities to connect data providers.

Anne Lammila, Finnish Ambassador to South Africa, on behalf of Lulu Ranne, Minister of Transport and Communications, welcomed the meaningful inclusion of youth and Indigenous communities, noting that Finland has a long history of collaboration with the Sámi on environmental monitoring and that their participation is crucial in ground truthing.

Thomas Dermine, Secretary of State for Science Policy, Recovery Program and Strategic Investments, Belgium, via pre-recorded video message, noted his country's involvement in GEO and in international EU Space programmes. He highlighted the successful launch, with the European Space Agency, of micro-satellites for global vegetation monitoring, and a satellite mission for monitoring the ozone layer, now in the implementation phase.

DEMOCRATIC REPUBLIC OF THE CONGO (DRC), endorsed all GEO resolutions and, noting the DRC's size, biodiversity, hydrology, and human and natural resources, assured participants that his country "will play its role in the welfare of our Earth."

Richard Spinrad provided strong support for the Declaration, believing it outlined the valuable actions needed to achieve key goals, and said he looked forward to its implementation. He concluded by announcing USD 2 million in support for the GEOGLoWS.

Implementing the Declaration and Strategy: This session was chaired by Xiaohan Liao, Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences.

Viscount Camrose, Parliamentary Under Secretary of State, Department for Science, Innovation and Technology, UK, recognized the enormity of the task ahead to reach the goals of the 2030 Agenda, the Paris Agreement, and the Sendai Framework, but said GEO's inclusivity and ability to co-design

programmes well positions it to enable decision makers to address these challenges.

Yuko Nagano focused her remarks on Japan's contributions, including: launch of a satellite in 2024 to gather information on GHG emissions that will serve, among others, to improve national GHG inventories under the UNFCCC; and continued integration of DIAS, including its use in the development of a malaria early warning system in collaboration with South Africa.

Justine Lumumba Kasule, Minister for General Duties, Office of the Prime Minister, Uganda, welcomed the Declaration and expressed her country's commitment to its implementation. She highlighted, *inter alia*: enhancing coordination; service delivery; increasing investment in disaster risk reduction; and building capacity and skills particularly among youth.

Shonisani Munzhedzi, CEO, South African National Biodiversity Institute, emphasized the importance of equity, diversity, and inclusion in the Declaration, noting the important role these values play in serving as a beacon towards a future where all voices are heard.

Ahmad Shaba Halilu, Director-General, Strategic Space Application Department, National Space Research and Development Agency (NASRDA) Nigeria, in a statement read by Matthew Adepoju, Director, NASRDA, Nigeria, highlighted the increasing demand for high-resolution data in Nigeria and cited partnerships with the US and China as drivers of capacity building in the country.

Johan Stander expressed the WMO's full support of GEO's Post-2025 Strategy, commending its mission and goals, especially the concept of Earth intelligence delivering actionable information. He welcomed its partnership, particularly with the WMO's Early Warnings for All initiative.

Aaron Addison, Executive Director, WGIC, said that, as a not-for-profit organization and the only global trade organization working with the commercial sector, WGIC welcomed a stronger partnership with youth, Indigenous Peoples, academia, the private sector, and civil society. He called for continued investment in space agencies and collaboration with the commercial sector.



Viscount Camrose, Parliamentary Under Secretary of State, Department for Science, Innovation and Technology, UK

Additional Remarks by Ministers/Ministerial-appointed Representatives: During interventions, NORWAY underscored the importance of building on existing infrastructure and reducing duplication, while MEXICO and the NETHERLANDS reaffirmed their commitments to support the Ministerial Declaration and the GEO Post-2025 Strategy.

In support of the Declaration and Strategy, ITALY noted it would continue to work with the GEO Indigenous Alliance to amplify Indigenous voices and co-produce solutions that incorporate traditional knowledge. GHANA emphasized the GEO Indigenous Alliance as playing an important role in ensuring we do not leave anyone behind.

Closing Statements: This session was chaired by Xiaohan Liao. Richard Spinrad called again for listening to the voice of youth, saying “shame on us if we don’t embrace their enthusiasm, organization, intelligence and hope.”

Pencho Garrido Ruiz extolled GEO as a community of committed professionals seeking to share the benefits of the digital revolution across the world. Underscoring the importance of education and innovation, he congratulated youth and underlined the importance of implementing the GEO vision.

Daan Du Toit, Deputy Director-General, Department of Higher Education, Science and Technology, on behalf of Blade Nzimande, Minister of Higher Education, Science and Technology, South Africa, celebrated the GEO mission and its Post-2025 Strategy as a beacon of hope, and said South Africa stands ready to take up the call for action.

Saying “we are all interlinked and all countries play a part,” Guangjun Zhang referred to GEO as being at the forefront of multilateralism and science and technology cooperation, stressing its importance in the pursuit of bridging the divide between developed and developing countries.

Chair Liao closed the meeting at 16:07.

Upcoming Meetings

2023 Global Crop Diversity Summit: The Global Crop Diversity Summit 2023 will bring together stakeholders from around the world to discuss the role of seed banks in securing a nutritious food future in the face of multiple crises. The Summit will take place on the theme, “Empowering Seed Banks to Combat the Climate, Biodiversity, and Food Crises.” **dates:** 14 November 2023 **location:** Berlin, Germany **www:** croptrust.org/global-crop-diversity-summit/

2023 Climate Change Conference: COP 28, the 18th meeting of the COP serving as the Meeting of the Parties to the Kyoto Protocol (CMP 18), and the fifth meeting of the Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement (CMA 5) will convene. The first Global Stocktake is on implementation of the Paris Agreement is also expect to conclude. **dates:** 30 November - 12 December 2023 **location:** Dubai, United Arab Emirates **www:** unfccc.int/

6th Meeting of the UN Environment Assembly: UNEA-6 will convene under the theme “Effective, inclusive and sustainable multilateral actions to tackle climate change, biodiversity loss, and pollution.” It will be preceded by the

sixth meeting of the Open-ended Committee of Permanent Representatives, which will take place from 19-23 February 2024. **dates:** 26 February - 1 March 2024 **location:** Nairobi, Kenya **www:** unep.org/environmentassembly/unea6

UN Biodiversity Conference: COP 16 to the Convention on Biological Diversity will convene in October – November 2024. The 11th meeting of the COP serving as the Meeting of the Parties (MOP) to the Cartagena Protocol on Biosafety (CP-MOP-11) and the fifth session of the MOP to the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of the Benefits Arising from their Utilization (NP-MOP-5) will also convene. **dates:** 21 October - 1 November 2024 **location:** TBA **www:** cbd.int/meetings/

2024 UN High-level Political Forum on Sustainable Development (HLPF): The 2024 session of the HLPF will be the 12th session of the HLPF and will take place under the auspices of the UN Economic and Social Council under the theme “Reinforcing the 2030 Agenda for Sustainable Development and eradicating poverty in times of multiple crises: The effective delivery of sustainable, resilient and innovative solutions.” It will include an in-depth review of SDG 1 (no poverty), SDG 2 (zero hunger), SDG 13 (climate action), SDG 16 (peace, justice and strong institutions), and SDG 17 (partnerships for the Goals). **dates:** 8-18 July 2024 **location:** UN Headquarters, New York **www:** hlpf.un.org/

For additional upcoming events, see: sdg.iisd.org

Glossary

COP	Conference of the Parties
DIAS	Data Integration and Analysis System Program
EO	Earth observations
GEO	Group on Earth Observations
GEOGLAM	Global Agricultural Monitoring Initiative
GEO-LDN	GEO Land Degradation Neutrality
GEOGLoWS	Global Water Sustainability Initiative
GEOSS	Global Earth Observation System of Systems
IUCN	International Union for Conservation of Nature
LDN	Land degradation neutrality
NASRDA	National Space Research and Development Agency
NOAA	National Oceanic and Atmospheric Administration
SDGs	Sustainable Development Goals
UNCCD	United Nations Convention to Combat Desertification
UNFCCC	United Nations Framework Convention on Climate Change
WMO	World Meteorological Organization