

## The Global Ecosystems Atlas First Convening Meeting

Geneva, 17 - 18 May 2023

The Global Ecosystems Atlas First Convening Meeting, held on the 17<sup>th</sup> and 18<sup>th</sup> of May in Geneva, Switzerland, brought together stakeholders to kick off the development of the Global Ecosystems Atlas – a new initiative aimed at comprehensively mapping and assessing the world’s ecosystems based on integrated, demand-driven, co-designed, innovative Earth observations (EO) solutions and novel partnerships. (*Full Agenda found in Annex A*).

Organized by the Group on Earth Observations (GEO), the two-day meeting brought together 70 participants from, inter alia, governments, space agencies, commercial satellite and geospatial companies, technology providers, conservation organizations, philanthropic foundations, UN bodies, multilateral environmental agreements and regional organizations (*Full Participants List found in Annex B*). Overall, the meeting hosted 70 participants, with 37 in-person attendees and 33 online; 41 total organizations were represented, of which 27 attended in person.

### OPENING SESSION

The meeting was opened by Yana Gevorgyan (*GEO Secretariat Director*) who thanked the attendees for their presence and active engagement, emphasising the need for collaboration and shared goals in safeguarding biodiversity for future generations. H.E. Khadeeja Naseem (*Minister of State for Environment, Climate Change and Technology, Maldives*) and H.E Vaimu’a Muliava (*Member of Government in charge of Innovation and Digital Transformation, New Caledonia*) expressed their belief in the critical role of EO and frontier technology to urgently respond to the adverse impacts of climate change and challenges associated to biodiversity loss, which is vital for small island states.

Other keynote speakers including Jillian Campbell (*Head of Monitoring, Review and Reporting, CBD*), Youssef Nassef (*Director of the Adaptation Programme, UNFCCC*); Barron Orr (*Chief Scientist, UNCCD*); Musonda Mumba (*Secretary General, Ramsar Convention on Wetlands*) and Mmboneni Muofhe (*Lead Co-Chair, GEO*) highlighted the pressing need for improved and targeted data for informed decision making. Emphasis was placed on the importance of transformative monitoring approaches that build off existing initiatives to enable global data equity for the preservation of our natural environments.

#### 1. SESSION 1: VISION AND OBJECTIVES OF THE ATLAS

Moderated by Marco Lambertini (*WWF*), Session 1 unpacked the vision and objectives for the Atlas. Yana Gevorgyan (*GEO Secretariat*) presented the rationale for the Atlas, followed by Alessandra Alfieri (*UNSD*) and Vani Koroisamanunu (*SPREP*) who discussed global and national policy and data needs, and James d’Ath (*TNFD*) and Macro Daldoss Pirri (*SBTN*) who discussed the business and financial sector data needs that the Atlas should meet.

#### The main points discussed were:

##### 1.1 The vision and objectives for the Atlas

The goals of the meeting were recalled: agreeing on the vision, purpose, and objectives of the Atlas; agreeing on collaboration mode for the development of the Atlas; and agreeing on the next steps.

Regarding the vision and objectives, emphasis was placed on the importance of building consensus through scientific methodology in developing the Atlas, which is intended as a comprehensive reference that will drive, assess, and report on sustainable management of global ecosystem resources. It was established that the Atlas would allow entities to report on the extent of their climate risks against targets of multilateral environmental agreements and multiple other uses.

##### 1.2 Collaboration, integration, impact, and open access are what excite prospective Atlas partners the most

The recognition of the transboundary nature of climate impacts and adaptation further reinforced the commitment to fostering cooperation, knowledge exchange, and shared responsibility among the stakeholders involved in the development of the Atlas.

### **1.3 The Atlas has the potential to respond to global reporting frameworks and regional/national data needs**

Significant comments were made regarding the Atlas as a crucial tool for assisting countries in identifying biodiversity changes in light of the 2030 goal under the Global Biodiversity Framework (GBF), in the face of growing negative climate impacts. It was acknowledged that ground data collection and availability need to be improved, and addressing this deficit necessitates robust community engagement. Participants stressed the importance of collaboration with regional, national and sub-national entities to ensure the success of this initiative and to gather essential contextual information on ecosystem environments.

### **1.4 The Atlas has the potential to respond to business and finance sector data needs**

It was highlighted that a prevalent narrative in financial markets is the perceived lack of nature-based data. However, participants acknowledged a recent shift in the business and economic sectors, recognizing the importance of both remotely sensed and in situ data in informing strategies, particularly in achieving deforestation-free value chains. It was noted that data utilization has become increasingly necessary for private sector risk evaluation and framework development. In response, there is a growing trend of multidisciplinary cooperation within the sector to leverage both remotely sensed and in situ data.

### **1.5 The Atlas will build on existing initiatives, tools, and datasets of many of the partners gathered today and beyond**

An acknowledgement was made of the long history of efforts in utilizing EO in powering solutions to monitor ecosystems. The Atlas will build off efforts of the IUCN Global Ecosystem Typology (GET), Global Mangrove Watch, ForestWatch, and Allen Coral Atlas, amongst others.

## **2. SESSION 2: THE MINIMUM REQUIREMENTS FOR THE ATLAS**

Moderated by Daniel Juhn (*CI*), Session 2 explored the minimum requirements for the Atlas and the anticipated challenges and opportunities that these requirements bring with its development. Speakers included David Keith (*IUCN*) and Roger Sayre (*USGS*), who discussed current examples of ecosystem extent tracking. Mandy Driver (*SANBI*) also explored the national perspective on classifying ecosystem types and mapping ecosystem extent.

**The main points discussed related to minimum requirements were:**

### **2.1 The scale that ecosystems exist on should be a crucial consideration in the development of key technical components of the Atlas**

Attendees acknowledged the gaps in knowledge that currently exist at different mapping scales. Emphasis was placed on the need for cooperation with national governments when prioritizing local on-the-ground scale data. The discussion highlighted challenges related to coarse spatial units in mapping, where ecosystem types are often mixed or based on dominant types within a given spatial unit. The potential of Artificial Intelligence (AI) and Very High-Resolution (VHR) techniques to address scale issues was also considered.

### **2.2 There is a need to map changes in ecosystem environments**

Attendees provided valuable suggestions regarding the initial steps required for mapping ecosystem extent and developing common spatial units for the Atlas. It was emphasized that the Atlas should gradually progress from mapping extent to attributing ecosystem condition. The challenge of mapping changes in certain ecosystem types (e.g. marine ecosystems) compared to others (e.g. terrestrial ecosystems) was acknowledged. Consequently, a conservative classification approach was suggested to ensure accuracy and reliability.

### **2.3 There is a need to be clear on map definition and accuracy**

The importance of remaining faithful to the definition of what an ecosystem entails was noted as a key consideration. Furthermore, incorporating additional explanatory material alongside spatial data was emphasized as an essential component of a high-quality, clear map. By including such supplementary information, the map can provide a more comprehensive understanding of region-specific ecosystems, enhancing its usefulness to users.

#### **2.4 There is a need to develop methodologies that can be replicable and empower nations**

It was recognized that providing biodiversity mapping for governments can contribute to national Systems of Environmental Economic Accounting (SEEA) and the implementation of the GBF. Importantly, the project should prioritize data equity, ensuring fair and equitable access to data and information for all stakeholders involved. It was agreed that the social and institutional processes of the Atlas hold special importance, as their integration is vital for the widespread adoption of the product in national policy, planning, and decision making. Developing a methodology that is easily replicable and can be sustained in the future was identified as a necessary step during the Atlas' development stages.

**The main points discussed related to existing approaches and products were:**

#### **2.5 Minimum requirements should be taken from the UN SEEA Guidelines Section 3.37**

In relation to the data collection requirements, ecosystems: should be ecosystems; should be mappable; should be geographically comprehensive (wall-to-wall); should be spatially and mutually exclusive. Related to the platform requirements, it should have: an open and universally acceptable front end; curated geodatabase back end; minimum functionality that tracks changes around ecosystem extent.

#### **2.6 The Atlas should encourage alignment to the GET and build on existing information and mapping experiences at the global and national level to also support national inventories**

During the meeting, it was recognized that the GET should serve as a foundational layer in the Atlas. Other ecosystem maps, such as the South African National Ecosystem Classification System (SA-NECS) the World Terrestrial Ecosystems (WTE) Explorer, were cross-walked with the GET, demonstrating its utility as tool for synthesising maps developed independently. It was acknowledged that involving national experts in cross-walking between the GET and national assessments is crucial. Additionally, the Atlas should strive to promote alignment with the GET among national entities, enhancing governments' capacity to implement the GBF and other conventions.

#### **2.7 Global and national approaches are not mutually exclusive**

Based on the experience of the South African National Biodiversity Institute (SANBI), there is a certain credibility threshold that maps have to pass at a country level, and top-down maps generally fail to pass this threshold. A global map product should only be used with a national validation process that includes in situ and expert knowledge. However, it was highlighted that the Atlas, although not static, should be relatively stable and thus, provide the foundations for harmonizing national mapping efforts.

#### **2.8 More reflection is needed for in situ data: key experience for marine ecosystems**

Attendees highlighted the need for in situ data, which pose a limiting factor when mapping ecosystems. Field data is crucial for training models and map validation. However, currently available data are unevenly distributed and often not well maintained. It was agreed that a targeted investment effort is needed to utilize local knowledge and compile in situ data. Additionally, certain ecosystems (e.g. marine), require more in situ observation data due to the complications around collecting accurate EO data.

#### **2.9 It is essential to focus on users and understanding user experience, iterating user feedback**

Numerous attendees highlighted the importance of understanding user experience. Notably, the Atlas product should be built considering users' needs and experiences. A phase-gate approach was suggested as the optimal way to achieve this. In addition, attendees stressed the importance of identifying use cases at the initial stages of the Atlas' development.

### **3. SESSION 3: BUILDING THE PRODUCT**

Moderated by Corli Pretorius (*UNEP-WCMC*), Session 3 explored the role of technology in developing the Atlas product. Two panel discussions were held. The first panel discussion explored the role of VHR and AI in the Atlas. Speakers included Amy Rosenthal (*Planet*), Sook Yee Loh (*Maxar*), Dimitri Boulze (*Airbus*), Trevor Dhu (*Microsoft*), Cindy Schmidt (*NASA*) and Rajeev Jaiswal (*ISRO*). The second panel discussion explored technology as an accelerator to the Atlas. Speakers included Bobby Shackelton (*Climate Engine*), Paolo Tibaldeschi (*WWF*), Will Cadell (*Sparkgeo*), Sean Breyer (*Esri*) and Ferdinando Villa (*BC3*).

**The main points discussed related to the role of technology were:**

#### **3.1 VHR satellites, AI, machine learning, deep learning can inform the Atlas platform**

Commercial EO companies showcased current high spatial and temporal resolution satellite capabilities, as well as AI and machine learning algorithms that enable easier and more timely data analysis. It was highlighted that upscaling to large areas is no longer an issue due to advances in satellite technology and modelling, and that deep learning allows integration of diverse data sets.

#### **3.2 The Atlas project should consider establishing a workstream around integrating training data**

The usefulness of AI in training and validating data was emphasised. Attendees established that although AI is promising, a few points of discussion remain regarding the large amount of training data needed within the AI training approach, the access to powerful computing and storage capacity and the persisting need for human validation throughout the training stages.

**The main points discussed related to challenges and limitations of technology use were:**

#### **3.3 Trust challenges are associated with AI and frontier technology**

Particular attention was given to the trust challenges around the utilization of AI and machine learning involving familiarity, capacity, and principles. It was agreed that early establishment of the Atlas' AI principles and standards is imperative.

#### **3.4 Different use cases require different resolutions of data, not all need high spectral and spatial resolution**

User-centric and ecosystem-specific approaches were highlighted as critical to understanding spectral and spatial resolution needs. While the EO community can extract data at extremely high spectral, temporal and spatial resolutions, not all users may need this capability. Discussion from the floor highlighted the danger of errors and 'noise' that arises with VHR data and the need to remain aware of this potential limitation and trade-offs in decisions about data resolution.

#### **3.5 Licensing can be a barrier to high resolution**

The discussion explored current data licensing systems, underscoring ideas around licensing that needs to be more fit for purpose. Licensing, specifically for VHR imagery, was identified as another potential limitation of the project. Hence, the Atlas may provide an opportunity to bring about change in data provision through innovative mechanisms and partnerships.

#### **3.6 It is crucial to consider ground truthing change and to maintain it systematically over time**

Current problems in the industry were highlighted surrounding field data that is not fit for purpose, spatially equal, or up to date. It was noted that ground-truthing data requires additional investment from the EO industry. Opportunities were explored regarding AI and edge technology, which have the potential to dramatically increase the quantity and quality of in situ data, making it more affordable and timely.

#### **4. SESSION 4: THE COLLABORATION PROCESS**

Moderated by Yana Gevorgyan (*GEO Secretariat*) and Robert Filipp (*GEO Secretariat*), Session 4 provided a recap of the meeting noting that participants had broadly endorsed the Atlas concept note, explored the technical requirements of the Atlas, and identified major considerations to guide Atlas product development and user engagement. The session prompted discussions on the priority technical steps, and the collaborative process and resources necessary for the development of the Atlas.

**The main points discussed were:**

##### **4.1 There is urgency to pinpoint the technical design of the Atlas**

The pressing need to focus on the technical development of the Atlas was highlighted. The first order of business for the Atlas design should involve: an articulation of what demand the product will fill; use cases identified with users; a scientific and technical approach defined; a phased, coherent design and plan for production defined; financing secured.

Participants emphasized the importance of refining and advancing the technological aspects of the Atlas to ensure its effectiveness and usability. This includes addressing challenges related to data collection, processing, integration, and visualization. It was recognized that investing resources and developing a team of expertise in technical development is crucial to create a robust and user-friendly platform.

It was proposed that the next Atlas convening meeting will be a “design workshop” in August or September 2023 (dates to be confirmed).

##### **4.2 Potential working arrangements and key consortium partner requirements are needed going forward**

Interim working arrangements were proposed involving the Atlas Consortium as a subset of lead partners and donors of the overall Partnership. The project would be supported by a Project Management Office, a Steering Committee and Technical Committee(s). Participants noted the need to have a strong technical team centrally located at GEO Secretariat, as opposed to just one coordinator.

Key Consortium partner requirements were briefly discussed, including the commitment to the Atlas project co-design; the commitment to support the Atlas with in-kind resources and/or financial contributions; partner with GEO Secretariat on resource mobilization; as well as on communication and advocacy, including to maximise key events to promote the Atlas.

##### **4.3 Calculating a budget estimate should be a key consideration**

Discussions on the financial and other resources needs for the Atlas development highlighted the challenge of pinpointing the exact budget. It was suggested to gather feedback from other ecosystem tracking platforms to inform the breakdown of budgetary needs. The importance of sustained funding was emphasized by Global Mangrove Watch and Allen Coral Atlas.

##### **4.4 It is useful to leverage upcoming key events for the promotion of the Atlas**

Suggested key events and meetings as opportunities to socialize the Atlas and promote commitments include: GEO Symposium (GEO, June 2023); Land & Carbon Lab’s 2023 Summit (Global Forest Watch, June 2023); 2023 User Conference (Esri, July 2023); AmeriGEO Week (GEO, August 2023); Summit for Amazon Rainforest Alliance (August, 2023); Geo for Good Summit (Google, October 2023); Meeting of the Committee of the Review of the Implementation of the Convention (UNCCD, October 2023); Meetings of the Subsidiary Body on Scientific Technical and Technological Advice (CBD, October 2023); GEO BON Conference (GEO, October 2023); 28<sup>th</sup> Conference of the Parties (UNFCCC, Nov-Dec 2023); (Regional GIS Conference (SPREP, December 2023); American Geophysical Union Fall Meeting (AGU, December 2023); 16<sup>th</sup> Conference of the Parties (CBD, 2024); Our Ocean Conference (IOC/UNESCO, 2024); 14<sup>th</sup> Conference of the Parties (Ramsar Convention, 2025).

##### **4.5 Essential next steps to be taken**

In preparation for the Atlas Design Workshop to be hosted by the Villars Institute in Villars, Switzerland, at the end of August or September 2023 (dates to be confirmed), it was proposed to take the following steps:

- Opening the concept note up for review and consolidation.
- Identifying a use case for the development of a proof of concept.
- Identifying suggestions for country-engagement from the early stage.
- Identifying suggestions for ecosystem scientists and ecologists for additional input.

## 5. CONCLUSIONS

Overall, the meeting made significant headway in exploring the needs, expectations, technical and structural requirements essential for the development of the Atlas. The valuable input received during the meeting has laid the groundwork for consolidation of the concept note to embark on the project design phase. Looking ahead, the meeting underscores the significance of developing a proof of concept and engaging countries in co-designing the Atlas' product from the early stages. By involving diverse stakeholders, the Atlas will benefit from diverse perspectives, ensuring its relevance and effectiveness at all scales.

The Global Ecosystems Atlas First Convening Meeting served as a catalyst for meaningful discussion and collaboration, guiding GEO and partners closer to determining the core features of the initiative.



## ANNEX A: FULL AGENDA OF THE GLOBAL ECOSYSTEMS ATLAS FIRST CONVENING MEETING

Wednesday, 17 May 2023

09:00 - 09:10	<b>Welcome</b>
09:10 - 10:10	<p><i>OPENING SESSION</i></p> <p>Chair: Yana Gevorgyan</p> <p>Interventions</p> <ul style="list-style-type: none"> <li>• H.E. Khadeeja Naseem, Minister of State for Environment, Climate Change and Technology, President’s Office, Republic of Maldives</li> <li>• H.E. Vaimu’a Muliava, Member of Government in charge of innovation and digital transformation, Government of New Caledonia</li> <li>• Jillian Campbell, Head of Monitoring, Review and Reporting, Convention on Biological Diversity</li> <li>• Youssef Nassef, Director of the Adaptation Programme, United Nations Framework Convention on Climate Change</li> <li>• Barron Orr, Chief Scientist, United Nations Convention to Combat Desertification</li> <li>• Musonda Mumba, Secretary General, Ramsar Convention on Wetlands</li> <li>• Mmboneni Muofhe, Lead Co-Chair, Group on Earth Observations</li> </ul>
10:10 - 10:30	<b>Introductions by participants</b>
10:30 - 11:00	<i>Coffee Break</i>
11:00 - 12:45	<p><b>Session 1: Vision and Objectives of the Global Ecosystems Atlas</b></p> <p><i>Chair: Marco Lambertini</i></p> <p><b>Presentations (45 min)</b></p> <ul style="list-style-type: none"> <li>• GEO Rationale: Why the Atlas, Why Now, and Why GEO? Yana Gevorgyan</li> <li>• Understanding the demand (tbc): <ul style="list-style-type: none"> <li>o Global and national policy needs</li> </ul> </li> <li>• System of Environmental Economic Accounting, UN Statistics Division, Alessandra Alfieri</li> <li>• South Pacific Regional Environment Programme (SPREP), Vani Koroisamanunu</li> <li>o Business and finance needs</li> <li>• Task Force on Nature-related Financial Disclosures (TNFD), James d’Ath</li> <li>• Science Based Targets Network (SBTN), Erin Billman</li> </ul> <p><b>Interactive discussion via guiding questions in Slido (60 min)</b></p> <ul style="list-style-type: none"> <li>• What excites you about the Atlas?</li> <li>• What is absolutely critical to get right in designing the Atlas?</li> </ul>
12:45 - 14:15	<i>Lunch</i>
14:15 - 14:30	<b>Summary of Session 1 by Chair</b>
14:30 - 15:30	<p><b>Session 2: Building Blocks: Exploring the minimum requirements for the Atlas</b></p> <p><i>Chair: Daniel Juhn</i></p> <p><b>Presentations (30 min)</b></p>

	<ul style="list-style-type: none"> <li>Classifying Ecosystems: the Global Ecosystem Typology (GET), David Keith &amp; Angela Andrade, IUCN CEM</li> <li>Approaches to Mapping Ecosystem Extent, Roger Sayre, USGS</li> <li>A national perspective on classifying ecosystem types and mapping ecosystem extent, Mandy Driver, SANBI</li> </ul> <p><b>Interactive discussion via guiding questions (90 min)</b></p> <ul style="list-style-type: none"> <li>What are the minimum set of requirements for the Atlas and what are the challenges and opportunities developing it?</li> <li>Can existing approaches and products help us achieve these minimum requirements</li> </ul>
15:30 - 16:00	<i>Coffee Break</i>
16:00 - 17:00	<b>Session 2: Building Blocks (cont.)</b>
18:00	Reception in Honour of the Global Ecosystems Atlas sponsored by the Villars Institute, Location To Be Announced

Thursday, 18 May 2023

08:30 - 09:30	<p><b>Session 2: Building Blocks (cont.)</b>  <i>Chair: Daniel Juhn</i></p> <p><b>Panel discussion:</b> Starting with what exists</p> <ul style="list-style-type: none"> <li>Global Forest Watch, Rod Taylor, WRI</li> <li>Global Mangrove Watch, Ake Rosenqvist</li> <li>Allen Coral Reef Atlas, Paulina Martin, ASU</li> <li>MERMAID, Emily Darling, WCS</li> <li>ESA, Marc Paganini</li> </ul> <p><b>Interactive discussion via guiding questions</b></p> <ul style="list-style-type: none"> <li>What can we learn from your experience in mapping different ecosystem types and extent?</li> </ul>
09:30 - 10:00	<i>Coffee Break</i>
10:00 - 10:15	Summary of Session 2 by Chair
10:15 - 12:15	<p><b>Session 3: Building the Product</b>  <i>Chair: Ms. Corli Pretorius</i></p> <p><b>Panel discussion 3.a: VHR data and Artificial Intelligence (60 min)</b></p> <ul style="list-style-type: none"> <li>NASA, Cindy Schmidt</li> <li>Planet, Amy Rosenthal</li> <li>Maxar, Sook Yee Loh</li> <li>Airbus, Dimitri Boulze</li> <li>Microsoft, TBD</li> </ul> <p><b>Guiding questions</b></p> <ul style="list-style-type: none"> <li>As we push the boundaries of mapping to increasingly finer scales, what role do you see VHR and AI playing in enabling us to capture the necessary level of detail and accuracy, including in areas where data may be missing or incomplete.</li> <li>What challenges and limitations should we be aware of.</li> </ul>



	<p><b>Panel discussion 3.b: technology as an accelerator (60 min)</b></p> <ul style="list-style-type: none"> <li>• Climate Engine, Bobby Shackleton</li> <li>• WWF, Paolo Tibaldeschi</li> <li>• Sparkgeo, Will Cadell</li> <li>• Esri, Sean Breyer</li> <li>• BC3, ARIES for SEEA, Ferdinando Villa</li> </ul> <p><b>Guiding questions</b></p> <ul style="list-style-type: none"> <li>• How can latest data analytics and software development and open AI accelerate the fit-for-purpose development of the Atlas.</li> <li>• What partnerships and collaborations can be formed to deliver the Atlas as a digital public good.</li> </ul>
12:15 - 13:45	<i>Lunch</i>
13:45 - 14:00	<b>Summary of Session 3 by Chair</b>
14:00 - 16:00	<p><b>Session 4: The Collaborative Process</b>  <i>Chairs: Yana Gevorgyan and Robert Filipp</i></p> <p><b>Presentations (30 min)</b></p> <ul style="list-style-type: none"> <li>• The importance of getting it done at accelerated pace for 30x30, GBF stocktake, Carlos Manuel Rodriguez, GEF CEO</li> <li>• GEO Secretariat presentation of the proposed next steps, resource needs, and establishment of the Consortium and Friends of Atlas</li> </ul> <p><b>Discussion via guiding questions (90 min)</b></p> <ul style="list-style-type: none"> <li>• What specific roles and responsibilities can each participant or organization contribute to the success of the Global Ecosystems Atlas?</li> <li>• What are the potential challenges and barriers to successful collaboration and how can we overcome them?</li> <li>• What funding and resource needs are required to make the Atlas a success, and how can we secure these resources?</li> </ul>
16:00 - 16:30	<i>Coffee Break</i>
16:30 - 16:45	<b>Summary of Session 4 by Chairs</b>
16:45 – 17:15	<b>Concluding Remarks and Next Steps</b> , Yana Gevorgyan
17:15	<b>Informal Consultations</b> on Working Arrangements, Governance, Second Convening

## ANNEX B: FULL LIST OF PARTICIPANTS

	SURNAME	FIRST NAME	ORGANISATION
1	Naseem	Khadeeja	Ministry of State for Environment, Climate Change and Technology, President's Office, Government of Maldives
2	Muliava	Vaimu'a	Government of New Caledonia
3	Muofhe	Mmboneni	Lead Co-Chair, Group on Earth Observations (GEO)
4	Arguedas Montezuma	Eugenia	Ministry of Environment and Energy, Costa Rica
5	Filimohahau	Frantz	Government of New Caledonia
6	Shackelton	Bobby	Climate Engine
7	Pretorius	Corli	The UN Environment Programme World Conservation Monitoring Centre (UNEP-WCMC)
8	Mendes	Flavia de Souza	Planet Labs
9	Rosenthal	Amy	Planet Labs
10	d'Ath	James	Taskforce on Nature-related Financial Disclosures (TNFD Global)
11	Rodríguez	Carlos Manuel	Global Environment Facility (GEF)
12	Breyer	Sean	Esri
13	Dubois	Grégoire	Knowledge Center for Biodiversity, Joint Research Center - European Commission
14	Combal	Bruno	DG Environment - European Commission
15	Doignon	Gilles	DG Research & Innovation - European Commission
16	Cooper	Chuck	Vulcan
17	Taylor	Rod	World Resources Institute (WRI)
18	Sims	Michelle	World Resources Institute (WRI)
19	Schmidt	Cindy	National Aeronautics and Space Administration (NASA)
20	Paganini	Marc	European Space Agency (ESA)
21	Ochiai	Osamu	Japan Aerospace Exploration Agency (JAXA)
22	Andrade	Angela	International Union for Conservation of Nature (IUCN) - Conservation International (CI)
23	Keith	David	International Union for Conservation of Nature (IUCN) - University of New South Wales
24	Murray	Nicholas	International Union for Conservation of Nature (IUCN) - James Cook University
25	Rao	Madhu	International Union for Conservation of Nature (IUCN) - World Constitution and Parliament Association (WCPA)
66	Nicholson	Emily	International Union for Conservation of Nature (IUCN) - The University of Melbourne
27	Campbell	Jillian	Convention On Biological Diversity (CBD)

28	O'Connor	Brian	United Nations Convention to Combat Desertification (UNCCD)
29	Orr	Barron	United Nations Convention to Combat Desertification (UNCCD)
30	Driver	Amanda (Mandy)	South African National Biodiversity Institute (SANBI)
31	Skowno	Andrew	South African National Biodiversity Institute (SANBI)
32	Koundouri	Phoebe	Sustainable Development Solutions Network (SDSN) Global Climate Hub
33	Tamelander	Jerker	Ramsar Convention on Wetlands
34	Sayre	Roger	United States Geological Survey (USGS)
35	Lambertini	Marco	World Wildlife Fund (WWF)
36	Olwero	Nasser	World Wildlife Fund (WWF)
37	Tibaldeschi	Paolo	World Wildlife Fund (WWF)
38	Howell	Lee	Villars Institute
39	Billman	Erin	Science Based Targets for Nature (SBTN)
40	Darling	Emily	Wildlife Conservation Society (WCS)
41	Barabino	John	MERMAID
42	Koroisamanunu	Vani	Secretariat of the Pacific Regional Environment Programme (SPREP)
43	Villa	Ferdinando	Basque Centre for Climate Change (BC3)
44	Gonzalez	Andrew	GEO Biodiversity Observation Network (GEO BON)
45	Juhn	Daniel	Conservation International (CI) GEO Earth Observations for Ecosystem Accounting (EO4EA)
46	Hecheltjen	Antje	GEO Land Degradation Neutrality (GEO-LDN)
47	Wright	Max	Earth Observation for Ecosystem Accounting (EO4EA)
48	Alfieri	Alessandra	UN Statistics Division (UNSD)
49	Trevor	Dhu	Microsoft
50	Luers	Amy	Microsoft
51	Rosenqvist	Ake	solo Earth Observation (soloEO)
52	Cadell	Will	Sparkgeo
53	Boulze	Dmitri	Airbus
54	Jayaprasad	P.	Space Applications Center (SAC) - Indian Space Research Organisation (ISRO)
55	Singh	C.P	Space Applications Center (SAC) - Indian Space Research Organisation (ISRO)
56	Padalia	Hitendra	Indian Institute of Remote Sensing (IIRS) - Indian Space Research Organisation (ISRO)
57	Manjusree	Panchagnula	National Remote Sensing Centre (NRSC) - Indian Space Research Organisation (ISRO)
58	Reeves	Hugh	Walder Wyss Ltd.
59	Loh	Sook Yee	Maxar Technologies
60	Liu	Qinhuo	Chinese Academy of Sciences

61	Tudenggongbu	Chad	United Nations Framework Convention on Climate Change (UNFCCC)
62	Burkett	Virginia	United Stated Geological Survey (USGS)
63	Nicinska	Justyna	National Oceanic and Atmospheric Administration (NOAA)
64	Zhu	Zhiliang	United Stated Geological Survey (USGS)
65	Daldoss Pirri	Marco	Science Based Targets for Nature (SBTN)
66	Meyer	Carsten	Group on Earth Observations Biodiversity Observation Network (GEO BON)
67	Agil	Ahmed Hilal	The Eco Org
68	Rajeev	Jaiswal	European Data Protection Office (EDPO) Division of the Indian Space Research Organisation (ISRO)
69	Coi	Odilia	United Nations Framework Convention on Climate Change (UNFCCC)