



## Briefing note on the Task Force on Monitoring for the UN Decade on Ecosystem Restoration 2021-2030

12 May 2021

### *Objectives of the Task Force on Monitoring*

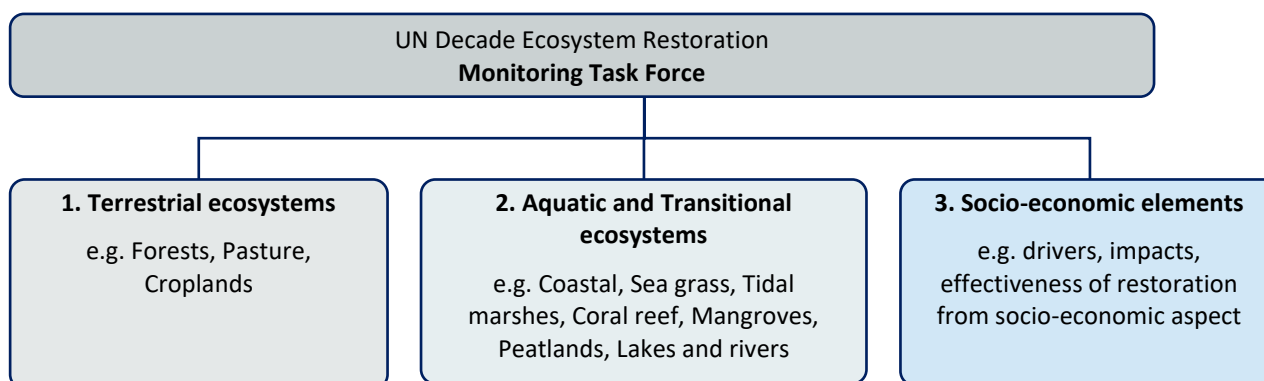
1. The Task Force on Monitoring (Monitoring TF) brings together 277 technical experts from 100 organizations tasked with collaboratively developing a monitoring framework for the United Nations Decade on Ecosystem Restoration (2021-2030). The developed framework will enable monitoring and reporting of the progress of restoration efforts throughout the duration of the UN Decade. Member affiliations extend to international organizations and all restoration stakeholders including NGOs, governmental agencies, academia and organizations implementing restoration initiatives across ecosystems. Each member has an equal opportunity and responsibility to engage in the discussion.
2. With an overall objective of contributing to the implementation of the Decade as well as to the UNSG's reporting to the UNGA on the status of implementation (to be made at its 81<sup>st</sup> session in 2026-27), specific objectives of the Task Force are to:
  - 1) Develop and propose a framework (including indicators, available tools/databases, reporting lines and timelines) for operational monitoring and for reporting the progress and achievements on both biophysical and socio-economic aspects of restoration which occur throughout the duration of UN Decade, and advise stakeholders as necessary;
  - 2) Serve as focal point for providing technical guidance and assistance on restoration monitoring for UN Decade flagships;
  - 3) Foster collaboration between conventions, frameworks, and emerging monitoring initiatives, which monitor and report elements of restoration in various ecosystems and seek synergies, and avoid duplication of effort.
  - 4) Develop Terms of References for sub-task forces for monitoring restoration across different ecosystems.
  - 5) Identify key gaps and areas of critical importance to restoration monitoring which require further research and development and targeted investment to ensure all ecosystems can be adequately monitored through the decade.

### *Structure and working modality*

3. The Framework on Ecosystem Restoration Monitoring will be supported by different sub-taskforces 1) terrestrial ecosystems (including forests, pasture and croplands); 2) aquatic and transitional (including coastal, seagrass, tidal marshes, coral reef, wetlands and inland waters, and mangroves); 3) socio-

economic elements of ecosystem restoration. The sub-taskforces are not mutually exclusive and aim at catalyzing different expertise to assist in development of the FERM.

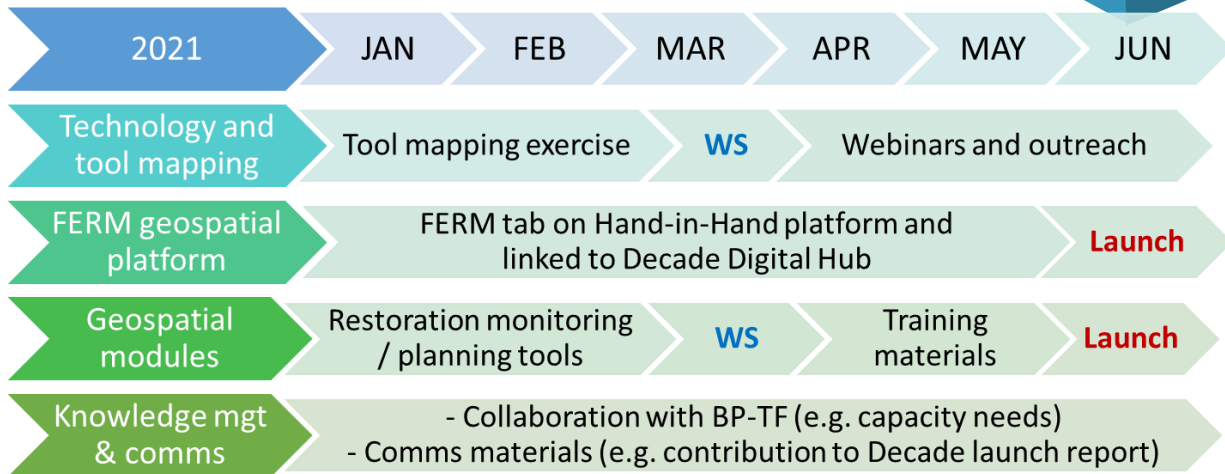
4. The full task force aims to meet every 6 weeks to present progress and discuss with TF members on emerging monitoring topics. Sub Task meetings will be convened on an ad hoc basis to progress specific thematic items.
5. An internal Task Force comprising FAO and UNEP-WCMC meets weekly to coordinate TF activities and progress day-to-day tasks. These internal TF members have also participated in several meetings with the Decade management group to receive necessary guidance to deliver the expected outputs in time for the official launch of the UN Decade in mid-2021, on the occasion of World Environment Day. The Monitoring TF also holds regular calls with another FAO-led Task Force on Best practices to ensure alignment of workplans, explore opportunities for collaboration and to ensure continuity.



### *Workplan for 2021*

6. An updated work plan for 2021, as presented in the fifth TF meeting linked below, included the following work streams. The work plan culminates in a Minimum Viable Product (MVP) Framework for launching at World Environment Day 2021 (5<sup>th</sup> June 2021).
  - 1) Development of the Framework for Ecosystem Restoration Monitoring (FERM)
  - 2) Technology and innovation for restoration monitoring – mapping of available technology and tools against monitoring indicators
  - 3) Development of a geospatial dissemination platform for FERM in collaboration with the FAO Hand-in-Hand geospatial platform
  - 4) Development of geospatial modules for monitoring and planning restoration activities for different ecosystems, for use by restoration stakeholders
  - 5) Knowledge management and communication

Details and progress made so far for each work stream are available in the [Annex](#) to this document.



- As part of the activities for 2020 and 2021, specific Monitoring TF members meet regularly to discuss key institutional advantages, opportunities for collaboration and synergies among planned restoration monitoring work, to reduce overlap and capitalize on institutional capacities which already exist. Another opportunity to further document existing advantages in restoration monitoring which can lead to better outcomes for practitioners is Workshops on Technology and Innovation for Restoration Monitoring, being convened in the first half of 2021.

### Contacts

- For any inquiries on the Monitoring TF, kindly contact the coordination team indicated below through [Restoration-Monitoring@fao.org](mailto:Restoration-Monitoring@fao.org)

#### Coordination team:

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## ANNEX

### *Background of the Monitoring TF*

1. On 1 March 2019, the United Nations General Assembly adopted a resolution for 2021 – 2030 to be the United Nations Decade on Ecosystem Restoration, which was originally proposed by El Salvador along with 71 co-sponsoring countries. The resolution invited FAO to lead the implementation of the Decade along with UNEP and in collaboration with the secretariats of the Rio conventions, other relevant multilateral environment agreements and entities of the United Nations system.
2. Following discussions with the Decade management team, comprised of FAO, UNEP and key partners (IUCN and CIFOR), FAO has been tasked to lead two task forces on monitoring and best practices, for which National Forest Monitoring (NFM) team, Forest and Landscape Restoration Mechanism (FLRM) team of the FAO Forestry Division working in close collaboration with Land and Water Division, have been internally appointed to coordinate the activities, respectively.
3. In the meantime, since late 2019, FAO and UNEP in collaboration with partners have initiated a process to develop a strategy for the Decade implementation, building on a series of consultation with governments, practitioners, civil society, youth and private sector. These two FAO-led task forces are formalized in the Strategy document, which has been launched in September 2020 (available here <https://www.decadeonrestoration.org/strategy>).
4. Terms of References for the Task Force on Monitoring and Task Force on Best Practices were developed in early 2020 after consultation with stakeholders who expressed interest in joining the TFs. The two Task Forces were jointly launched on 31 March 2020 in an online event hosted by UN Decade management.
5. Subsequently, the Monitoring TF has organized a series of meetings to discuss the development of a monitoring framework, indicators, normative guidance, methodologies and case studies, all of which are deemed essential for effective monitoring of the Decade.

### *Monitoring TF activities and progress*

#### **a) TF / Sub-TF meetings**

6. The Monitoring TF has so far organized five full TF meetings, several Sub TF consultation meetings, and many bilateral partner meetings. Below is a list of meetings and links to the meeting recordings:
  - 1) **31 March 2020 – 1<sup>st</sup> Joint Meeting for the launch of the TFs on Monitoring and Best Practices**

Summary: The first meeting was held primarily to present the overview of the ToRs for both Task Forces, which were developed in consultation with TF members. A total of 56 members from both TFs participated.

Recording: Link to Adobe Connect [1 Opening](#), [2 Monitoring TF](#), [3 Best Practices TF](#)

Meeting documents: [Link](#)

**2) 17 April 2020 – 2<sup>nd</sup> Meeting of the Monitoring TF**

Summary: The second meeting was held on 17 April with participation of 41 members, to first revisit the ToR presented during the TF launch event on 31 March. Partners provided feedback on outputs, timelines and contributions, as well as discussed working modalities of the group. A presentation of the proposed Framework for Ecosystem Restoration Monitoring (FERM) was provided followed by a presentation from colleagues of the Global Restoration Observatory (GRO).

Recording: [Link](#)

Meeting documents: [Link](#)

**3) 18/22 May 2020 – Consultation meetings by Sub TF on Aquatic and Transitional ecosystems**

Summary: The SubTF on Aquatic and Transitional ecosystems met twice in the week of 18 May, to 1) discuss and identify potential indicators of restoration success, 2) overview relevant targets metrics and reporting mechanisms, 3) start identifying gaps in data and methodologies, and 4) learn from relevant processes such as Ramsar Convention, CBD and IPBES.

Recording: [Session 1 on 18 May](#), [Session 2 on 22 May](#)

**4) 22 May 2020 – Consultation meeting by Sub TF on Terrestrial ecosystems**

Summary: 20 members of the Sub TF on Terrestrial ecosystems met on 22 May to discuss the proposed structure and platform of FERM, specifically how ecosystem monitoring by people, communities and countries could be supported through the generation of normative information and methodological guidance through technology, innovation and partnerships. Discussion also focused on how to identify existing reporting frameworks, indicators and data relevant to terrestrial ecosystems restoration.

Recording: [Link](#)

**5) 26 June 2020 – 3<sup>rd</sup> Meeting of the Monitoring TF**

Summary: The third meeting was held on 26 June with participation of 61 members, to provide updates from two sub Task Forces on Terrestrial ecosystems and Aquatic and Transitional ecosystems. Partners provided feedback on the FERM platform and indicators identified as well as shared experiences and lessons learned from different modalities such as CBD and IPBES. A proposal was made to add socio- economic aspects in the monitoring framework.

Recording: [Link](#)

Meeting documents: [Link](#)

**6) 16 October 2020 – Ecosystem Expert consultation on first set of priority indicators**

Summary: In mid-October, a subset of TF members (25) gathered to discuss the first set of priority indicators and agree on a proposed workflow for indicator selection. This working session featured experts from all three Sub Task Forces and provided key input into determining the potential to report on restoration using existing frameworks, starting from the SDGs.

Recording: [Link to Zoom](#)

**7) 30 October 2020 – Launch event and consultation meeting of the Sub TF on Socio-economics**

Summary: 1<sup>st</sup> meeting by the Sub TF on socio economics to agree on the working modality and discuss the criteria for selecting relevant indicators to monitor the impact of restoration actions from SDGs and existing frameworks, identify gaps and next steps.

Recording: [Link](#)

Meeting documents: [Link](#)

**8) 13 November 2020 – 4<sup>th</sup> Meeting of the Monitoring TF**

Summary: The fourth meeting of the TF was attended by 76 TF Members. Updates were provided by the coordination team and sub TF coordinators on the priority indicator selection process. The TF members were invited to review and provide comments on the process and to contact sub TF coordinators for further involvement. The session further highlighted relevant developments of partners, notably on the communication efforts by UNEP and on the global overview of restoration commitments by PBL - Netherlands Environmental Assessment Agency ("[Goals and Commitments for the Restoration Decade](#)")

Recording: [Link](#)

Meeting documents: [Link](#)

**9) 17 December 2020 – 5<sup>th</sup> Meeting of the Monitoring TF**

Summary – The fifth meeting of the Task Force on Monitoring, attended by 70 TF members, heard from the secretariats of three Rio conventions (UNFCCC, UNCCD and CBD) and Ramsar convention on their existing and forthcoming monitoring and reporting frameworks, to seek synergies between the work under these conventions and future reporting under the UN Decade. The meeting also featured update presentations on the FERM database, a review of the sub TF activities through 2020 and an overview of the 2021 work plan.

Recording: [Link](#)

Meeting documents: [Link](#)

**10) 17 March 2021 – 2<sup>nd</sup> meeting of the Sub TF on Socio-economics**

Summary – The second meeting of the sub-task force on socio-economic indicators provided an overview and updates of the Task Force on Monitoring and on the Framework for Ecosystem Restoration Monitoring platform (FERM), as well as on the results of the preliminary analysis carried out to prioritise SDGs and MEAs indicators, and on relevant synergetic initiatives such as "The Road to Restoration" and The Economics of Ecosystem Restoration (TEER).

Meeting documents: [Link](#)

**11) 10 May 2021 – Update meeting of the Sub TF on Aquatic and Transitional Ecosystems**

Summary – Meeting's objective was to inform, share and invite participants to exchange plans, including the UN Decade's launch, advances, events and other opportunities to draw attention to the monitoring restoration of aquatic and transitional ecosystems. The Sub TF highlighted importance of raising the profile and information on the need to invest in monitoring approaches and related capacity development for these ecosystems, in particular. Members were invited to partner, mobilize resources, organize events, and bring visibility to this work area to ensure a greater impact.

Recording: [Link](#)

### *Upcoming meetings:*

#### **1) May 2021 (TBD) – 6<sup>th</sup> meeting of the Monitoring TF**

The sixth meeting of the Monitoring TF will share latest updates on the development of the FERM platform and seek feedback from the TF members, before its soft launch in early June.

#### **2) 3 June 2021 – A restoration monitoring session during the GLF Africa**

This session will spotlight key solutions and highlight ongoing challenges in ecosystem restoration monitoring with a focus on drylands. The session will feature a soft launch of the FERM with a special focus on the integration and implementation of the Drylands Restoration Monitoring Platform (DRIP) developed by FAO in support of the UN Decade.

### **b) Technology and tool mapping**

7. Technology and innovation play a critical role in making FERM truly practical and effective, given the ever-growing availability of information including satellite data and recent rapid advancement in computer science such as in the field of artificial intelligence.
8. The Monitoring TF convenes virtual expert **Workshops on Technology and Innovation for Restoration Monitoring** to validate the selected tools, building on the indicator collection processes of the Rio Conventions and relevant monitoring/reporting frameworks. The overall objective of the expert workshops is to identify how new technology and innovation in restoration monitoring can be used to measure indicators, where the collective strengths lie and where research and development are further required for application by restoration stakeholders. Match-making of indicators against technical solutions will further enable the development of normative guidance and technology transfer for restoration stakeholders, which can be implemented throughout and in support to the UN Decade.

#### **1) 31 March 2021 – 1<sup>st</sup> session**

Summary – The first session took place as part of the Monitoring TF's planned activities leading up to the official launch of the UN Decade in June 2021. The session was attended by a total of 85 TF members, and featured presentations from colleagues from WRI, ICRAF/CIFOR and ICRI on several perspectives on restoration monitoring. Mapping exercises attempted by FAO and WEF were then presented to highlight existing tools and platforms available for restoration monitoring, before breaking into 4 discussion groups for further discussions on gaps and needs for restoration monitoring.

Recording: [Link](#)

Meeting documents: [Link](#)

#### **2) June-July 2021 (TBD) – 2<sup>nd</sup> session**

The second session of the Workshop series will be held after the Decade launch, with a focus on the review of technical solutions mapped against selected indicators as well as spotlighting solutions and perspectives from restoration “clients and users”

### c) The concept of the FERM

9. The FERM is proposed to be an operational framework for monitoring progress on ecosystem restoration to build trust and momentum for the UN Decade. The FERM will enable the identification of indicators (building on existing frameworks and indicators) to measure the progress of restoration efforts at various levels across key ecosystems. The FERM will further act as the primary place for the latest and most up to date data, methodologies in support to restoration practitioners, with linkages to innovative platforms to support restoration monitoring and acting as an umbrella. It will look to capitalize on partnership to collate and integrate data from systems to help give a global snapshot on the progress of ecosystem restoration. The FERM also intends to support ecosystem monitoring by all actors, people, communities and countries through the generation of normative information and methodological guidance through technology and innovation.
10. The FERM intends to enable knowledge and technology transfer and the development of capacity for people, communities, and countries to monitor their own restoration progress, supporting the creation of information by those who are undertaking restoration. Locally relevant information builds ownership and trust in restoration actions, enables participatory monitoring and the reporting of quality information on restoration progress, and can support effective and adaptive restoration actions in a changing climate.
11. The FERM will primarily be based on existing systems, frameworks and information that can be used to monitor ecosystem restoration globally. Gaps and needs in restoration monitoring exist, and will need to be supported through novel development of technology and partnerships through the Monitoring TF.

### d) Geospatial dissemination platform (FERM platform)

12. A geospatial dissemination platform to operationalize the FERM has been developed based on the geospatial architecture of FAO's Hand-In-Hand Geospatial Platform, and an MVP FERM platform will be launched on the 3<sup>rd</sup> of June. The landing page for the FERM, which will become operational on the 3<sup>rd</sup> of June is: <http://www.fao.org/national-forest-monitoring/ferm>. The platform is intended to be a place where users can specify an area of interest (AOI) and retrieve geospatial data on biophysical and socio-economic elements for the AOI from existing data layers. It is also expected that users can upload their original geospatial data to further combine useful data layers and analyze the status of restoration as necessary. Interoperability with other emerging restoration monitoring platforms is under discussion. Integration and harmonization with other platforms is planned for the second half of 2021.
13. The FERM geospatial platform was developed in collaboration with FAO's corporate Hand-in-Hand Geospatial Platform ([Geospatial Platform](#); [Video – Hand in Hand at a glance](#)), which brings together cross sectoral data for enhanced planning and decision-making. Collaboration with the Hand-in-Hand Geospatial Platform is advantageous and enhances connections with the data and platforms from different FAO technical divisions.

### e) Collaboration, Partnerships and Outreach

The Monitoring TF members have convened meetings and engaged in bilateral discussions with many key stakeholders to enhance collaboration and avoid potential duplications. Contributors to the Monitoring TF include: AFR100 Secretariat, Conservation International, Global Restoration Observatory (GRO) / WRI / Climate



Focus, ETH Zurich, IUCN, Ramsar Secretariat, UNCCD Secretariat, UNFCCC Secretariat, CBD Secretariat, UNEP-WCMC, World Economic Forum / 1T.org, Hermosa.

14. As part of outreach efforts, FAO Monitoring TF members also participated in several webinars on the UN Decade and produced some information pieces about the TF activities.

- 1) FAO Seminar on [“Healthy ecosystems for healthy life: the UN Decade on Ecosystem Restoration 2021-2030”](#) (22 Apr 2020)
- 2) UNEP and FAO [webinar on the UN Decade of Ecosystem Restoration](#) (28 May 2020)
- 3) UN-REDD blog post: [“Building a holistic monitoring framework for ecosystem restoration”](#) (9 Jun 2020)
- 4) 7th World Forest Week event [“Catalyzing a science-based restoration movement in the context of the UN Decade on Ecosystem Restoration: monitoring and action on the ground”](#) (12 Oct 2020)
- 5) Web story on FAO REDD+ website – [“Advancing ecosystem monitoring during the UN Decade for Ecosystem Restoration”](#) (23 Dec 2020)

### *Task Force members and affiliated organizations*

15. As of 11 May 2021, the Monitoring TF has a total of 276 members from 100 organizations (including independent category) in the contact list. Below is a list of organizations the TF members are affiliated:

| Organization   | # ppl | Organization   | # ppl | Organization                           | # ppl |
|--|-------|--|-------|--|-------|
| 4 per 1000 Initiative  | 2     | Helsinki Institute of Sustainability Science (HELSUS)  | 1     | UNCCD Secretariat                      | 4     |
| Adatos   | 1     | Hokkaido University                                    | 1     | UNDP                                   | 4     |
| African Union Development Agency-NEPAD (AUDA-NEPAD)                  | 2     | Independent  | 2     | UNEP                                   | 17    |
| Alliance of Bioversity International and CIAT                        | 1     | Intergovernmental Panel on Climate Change (IPCC)       | 1     | UNEP-WCMC                              | 4     |
| Biodiversity International   | 1     | International Coral Reef Initiative (ICRI)             | 2     | UNFCCC Secretariat                     | 2     |
| Bush Heritage Australia  | 1     | International Fund for Agricultural Development (IFAD) | 1     | Unilever                               | 1     |
| Care for Ecosystems UG (CfE) / International Mire Conservation Group | 1     | International Renewable Energy Agency (IRENA)          | 1     | United Nations University (UNU)        | 1     |
| CBD Secretariat  | 6     | International Union for Conservation of Nature (IUCN)  | 9     | United States Geological Survey (USGS) | 1     |
| Center for International Forestry Research (CIFOR)                   | 9     | Kiss the Ground  | 1     | University of Bonn                     | 1     |
| Center for International Forestry Research (CIFOR) / CIRAD           | 1     | Lestari Capital  | 1     | University of California, Davis        | 1     |
| Climate Focus / Global Restoration Observatory (GRO)                 | 2     | Luke   | 3     | University of Copenhagen               | 1     |
| Conservation International   | 2     | Mott MacDonald   | 1     | University of East London              | 1     |
| Deltares   | 2     | mundialis GmbH & Co. KG                                | 1     | University of Greifswald               | 2     |

|   |    |   |   |  |    |
|---|----|---|---|--|----|
| Eco-Innovation Foundation                                       | 1  | n.a.  | 6 | University of Hull                     | 1  |
| Economic Commission for Latin America and the Caribbean (ECLAC) | 1  | National Institute of Aeronautics and Space, Indonesia (LAPAN)                          | 1 | University of Leeds                    | 2  |
| Ecosystem Restoration Camps                                     | 1  | Norway's International Climate and Forest Initiative (NICFI)                            | 1 | University of Leicester                | 1  |
| ETH Zurich  | 4  | Observatoire du Sahara et du Sahel (OSS)  | 2 | University of Maryland (UMD)           | 1  |
| European Commission   | 1  | PBL Netherland Environmental Assessment Agency  | 2 | University of New South Wales          | 1  |
| European Investment Bank  | 1  | Plan Vivo Foundation  | 4 | University of Oxford                   | 1  |
| European Space Agency (ESA)                                     | 3  | Plant for the planet  | 1 | USAID                                  | 1  |
| Eurosite  | 2  | Ramsar Secretariat  | 4 | Wageningen University & Research (WUR) | 2  |
| FAO   | 65 | REFORESTUM  | 4 | WeForest                               | 2  |
| Forestry Research and Development Agency, Jakarta (FORDA)       | 1  | Restor  | 1 | Wetlands International                 | 3  |
| Forestry Research Institute of Nigeria (FRIN)                   | 1  | Riau Ecosystem Restoration  | 1 | Wildlife Conservation Society (WCS)    | 1  |
| Forests Ontario   | 1  | RSS - Remote Sensing Solutions GmbH   | 2 | Winrock International                  | 1  |
| Ghent University  | 1  | SarVision   | 2 | WOCAT / University of Bern             | 3  |
| GIZ   | 5  | Satelligence  | 1 | World Agroforestry (ICRAF)             | 3  |
| Global Adaptation Network (GAN) - UNEP                          | 2  | Southern African Science Service Centre for Climate Change and Adaptive Land Management | 1 | World Bank                             | 2  |
| Global Environmental Centre                                     | 2  | Succow Stiftung   | 1 | World Economic Forum (WEF)             | 2  |
| Global Forest Generation  | 2  | Technical University of Munich  | 1 | World Resources Institute (WRI)        | 10 |
| Global Forest Observations Initiative (GFOI)                    | 1  | Tentree   | 1 | World Wildlife Fund (WWF)              | 1  |
| Global Green Growth Institute (GGGI)                            | 3  | The James Hutton Institute  | 1 | WorldVision                            | 1  |
| Good Energies   | 1  | The Nature Conservancy (TNC)  | 3 | Yale University                        | 1  |
| Greifswald Mire Centre  | 3  | UK Centre for Ecology & Hydrology   | 1 |  |    |