Objectives of the
Task Force on Monitoring

1. The Task Force on Monitoring (Monitoring TF) brings together 433 technical experts from 150 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 81st session in 8th -22nd September 2026, specific objectives of the Task Force are to:

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.

Serve as focal point for providing technical guidance and assistance on restoration monitoring for UN Decade flagships.

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.

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 for Ecosystem Restoration Monitoring (FERM) 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; and 4) working group on the development of a monitoring framework for the GBF Target 2. 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 periodically to present progress and discuss with TF members on emerging monitoring topics. Sub Task Force meetings will be convened on an ad hoc basis to progress specific thematic items.

5. The Monitoring TF holds regular calls with the FAO-led Task Force on Best Practices and the UN Decade Coordination team to ensure alignment of workplans, explore opportunities for collaboration and to ensure continuity.
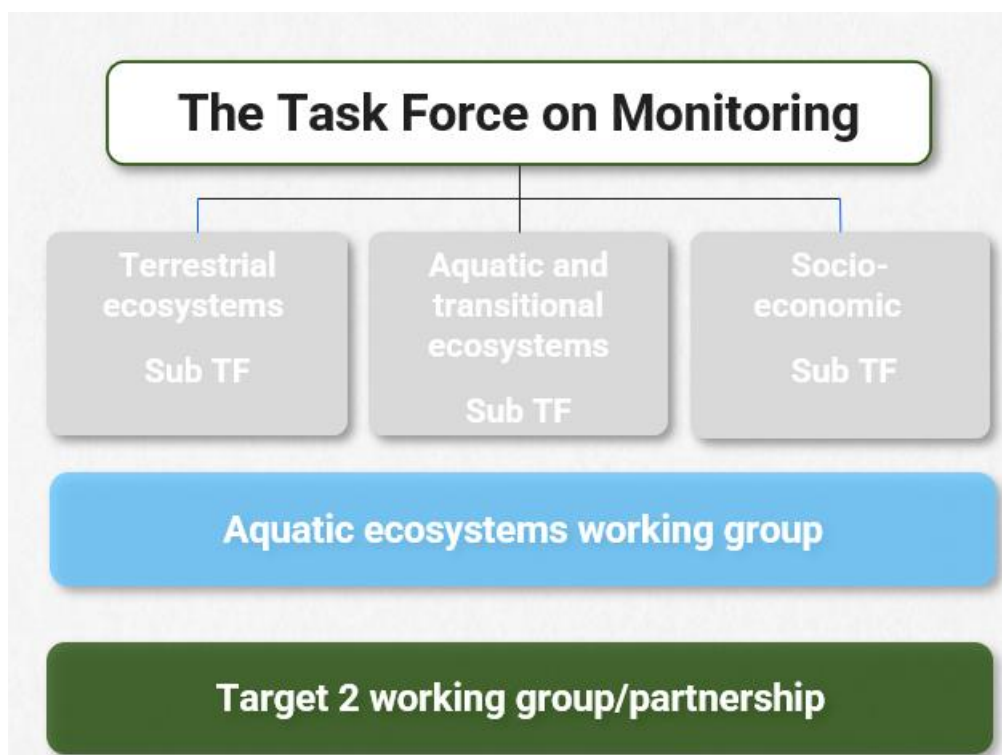
6. To support the monitoring and supporting of CBD post-2020 Global Biodiversity Framework (GBF) Target 2 (area under restoration), a Working Group was created in May 2022 composed of experts from FAO, CBD, UNCCD, UNEP-WCMC/BIP Ramsar, IUCN, SER/GRO, and ICRI. The Working Group has collaboratively drafted an Information Note with monitoring suggestions (link) and is developing a methodology for Target 2.

Monitoring the UN Decade and CBD Target 2

7. To support implementation of the UN Decade, a Programme has been developed "Leading the UN Decade on Ecosystem Restoration 2021–2030: A Multi-Partner Trust Fund". At the global level, this 5-year Programme aims to provide catalytic support to directly enable the UN Decade's success. The programme will:

Support awareness initiatives, partnerships, and targeted campaigns to share best practices and lessons on ecosystem restoration with a global audience. This will highlight the importance of ecosystem restoration to billions of people and significantly amplify the reach of the UN Decade.

Increase developing countries' capacity to strengthen policies and access restoration resources. The establishment of on-the-ground Flagship Initiatives will advance key local restoration activities, while highlighting global best practices for scale up and replication.

Document progress on ecosystem restoration through a global monitoring programme. This will ensure that the global dialogue on restoration takes place on a well-informed basis and that decision makers are kept accountable for restoration targets.

8. To help stakeholders move from commitments to action and enhance global restoration practices, stakeholders need access to up to date and detailed geospatial data across ecosystems as well as robust, up to date geospatial tools and functionality to share their own restoration progress. The Programme outcomes will enable this by developing a framework for monitoring and reporting the progress of the Decade and building capacity for monitoring ecosystem restoration, as well as contributing to the reporting of the progress UN Secretary-General's reporting on the status of the Decade and implementation to the UN General Assembly.

9. Monitoring and reporting against CBD Target 2 (restoration) can also be supported, to remove duplication of effort and to ensure monitoring and reporting alignment between the UN Decade and the CBD restoration target. As identified in the associated Information Note, the UN Decade intends to leverage all existing data collection processes, however, there is currently no single mechanism for collecting area-based information on ecosystem restoration. To fill this gap, the Working Group is developing a methodology to generate area-based estimates for restoration for both the UN Decade and CBD Target 2.

Key achievements in 2021-2024

10. One critical need the Task Force identified was the need for data access and transparency in restoration – and to meet this need the FERM geospatial dissemination platform was created. The minimum viable product of the FERM platform was presented at the UN Decade launch on World Environment Day, 2021.

11. The FERM platform is based on FAO's corporate Hand-In-Hand Geospatial architecture. Users can explore geospatial information related to soil, water, vegetation, and socio-economics for their ecosystem of interest. Users can access tools and guidance for restoration planning and monitoring, upload and integrate geospatial data in their own private workspace and can create and share compelling restoration impact stories. And finally, Users can apply advanced functionality with the integration of FAO's cloud computing platform SEPAL – which is also mobile compatible. But really this is just the beginning of a collaborative journey through the Task Force for Monitoring to make sure data, technology and innovation catalyzes restoration action on the ground, and to continue to strengthen partnerships in the restoration monitoring community.

12. The Task Force on Monitoring, led by FAO, has been requested by CBD to lead the reporting and guidance for Target 2, area under restoration, of the Global Biodiversity Framework. The draft guidance (link) and metadata (link) for reporting and monitoring the indicator was launched during CBD COP15 in Montreal, December 2022. Target 2 provides a concrete implementation mechanism for supporting the reporting and monitoring of ecosystem restoration. FAO is working collaboratively and closely with the Rio Conventions (CBD, UNCCD, and UNFCCC) and key organizations (GRO, ICRI, IUCN, Ramsar, SER, and UNEP-WCMC) to shape consistent and relevant guidance on Target 2. The direct beneficiaries of the work on Target 2 are the CBD Parties (196 countries) and indirectly, the broader communities that will benefit from consistent guidance and data on global ecosystem restoration.

13. Headline indicators for global level monitoring (link) were identified, consulted with Monitoring TF and other key experts, and were launched at the World Forestry Congress in May 2022. The analysis of the headline indicators for restoration monitoring will be reviewed in 2023 for the Annual Report on Global Restoration Progress.

14. The FERM platform and registry have been launched and updated in collaboration with the Monitoring Task Force. The FERM registry was launched at the World Forestry Congress in May 2022 and updated in December 2022. The Good Practice integration with the FERM registry was launched at the Global Landscapes Forum in September 2022. The FERM registry was made available to a broader audience, UN Decade Partners and later,

to the general public. The FERM registry has been piloted with GEF projects, in collaboration with the FAO-GEF unit, with planned support for monitoring functionalities in the FERM registry in the future. The FERM Registry was tested with restoration stakeholders in Kenya, feedback was recorded and subsequently included in the development plan of the platform. Geospatial data from the UN Decade Global Restoration Flagships were ingested into the FERM registry with Flagship focal points, providing introductory capacity development on the functionality of the registry.

15. In 2023, the FERM platform was further developed based on user feedback.

16. The analysis of the headline indicators for restoration monitoring was reviewed in 2023 for the Annual Report on Global Restoration Progress.

17. The monitoring of UN Decade Flagships was prioritized through on demand requests for targeted support. Full flagships (GGW, SIDS, Central America Dry Corridor) were supported for institutionalized and operational restoration monitoring at the regional and country level.

18. Monitoring and reporting against CBD Target 2 (restoration) has been supported to remove duplication of effort and to ensure alignment between the UN Decade and CBD restoration targets. The Working Group had meetings regularly to refine the methodology guidance including the Target 2 workshop which took place in November 2023

19. The analysis of the headline indicators for restoration monitoring was reviewed in 2023 for the Annual Report on Global Restoration Progress.

20. Five national dialogues and country workshops were delivered in 2024. In 2024, FAO and partners facilitated five national dialogues and workshops in Brazil, Burkina Faso, Kenya, Peru, and Vietnam to support the implementation of the Kunming-Montreal Global Biodiversity Framework Target 2. These efforts aimed to strengthen national capacities in restoration monitoring, ensuring alignment with existing platforms and gathering feedback on the methodology's application. Each pilot country hosted a national-level dialogue involving relevant ministries and stakeholders to assess current monitoring practices, data flows, and institutional frameworks. Key objectives included fostering a knowledge exchange network, exploring Target 2 elements, introducing the Framework for Ecosystem Restoration Monitoring (FERM), addressing ecosystem-wide restoration, gathering feedback on restoration data, and identifying challenges and capacity gaps. Short case studies were also developed.

21. A Target 2 Resource Guide Delivering Restoration Outcomes for Biodiversity and Human Well-being was developed in collaboration with SER and CBD and launched in CBD COP16, along with a country self-assessment tool. An E-learning course on restoration and a guidance brief on enabling consistent reporting and monitoring for freshwater (inland waters) restoration under Target 2 of the Kunming-Montreal Global Biodiversity Framework will be launched after COP16.

Workplan for 2024

22. In 2024, the FERM platform will be further developed based on user feedback, and an e-learning course on restoration monitoring will be created to facilitate autonomous technology transfer.

23. Targeted support for monitoring of the UN Decade Global Flagships includes Niger and Burkina Faso of the Great Green Wall, Vanuatu (in the Pacific), St Lucia (in the Caribbean), and Comoros (in the AIS region) for the Small Island Developing States and El Salvador, Honduras of the Central America Dry Corridor

24. Integrate Open Foris Ground with FERM to enhance data collection and processing capabilities. Incorporate Earth Map and ABC Map into FERM for more comprehensive ecosystem monitoring.

25. LoAs with partner organizations are foreseen to assist with the interoperability of multiple platforms already collecting information on areas under restoration, such as IUCN, Restor, UNEP-WCMC and others

26. Capacity development and piloting of methodology will be carried out with CBD for support reporting and monitoring on Target 2 and is currently active in Brazil, Burkina Faso, Kenya, Peru, and Viet Nam

27. Working Groups will be established based on ecosystem needs to ensure comprehensive coverage for Target 2 headline reporting.

28. Provide ongoing support for the GEF 8 Ecosystem Restoration Impact Program led by Conservation International. Additionally, GCF projects for Target 2 reporting will be piloted.

29. The analysis of the headline indicators for restoration monitoring will be reviewed in 2024 for the Annual Report on Global Restoration Progress.

30. Continue to develop and apply the forest restoration decision support tool, Se.plan, within SEPAL for national and regional studies.

31. Maintain and strengthen partnerships with key organizations such as UNEP, CBD, and WRI, among others, to enhance collaborative efforts in ecosystem restoration.

32. Plan to draft a report for the UN Secretary General's session on the status of the UN Decade on Ecosystem Restoration in 2026.

33. COFO note to outline FAO's leadership in the UN Decade of Ecosystem Restoration and reporting on Target 2.

Contacts

34. For any inquiries on the Monitoring TF, kindly contact the coordination team indicated below through Restoration-Monitoring@fao.org

Coordination team:

, Team Leader, National Forest Monitoring team, FAO

, Forestry Officer, National Forest Monitoring team, FAO

, Consultant, National Forest Monitoring team, FAO

, Consultant, National Forest Monitoring team, FAO

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 at 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, and work in close collaboration with the other mechanisms, such as the Task Forces of the UN Decade.

5. Subsequently, the Monitoring TF is in the process of developing a monitoring framework, indicators, normative guidance, methodologies, and case studies, all of which are deemed essential for the 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:

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

: Link

: The second meeting was held on 17 April with participation of 41 members, to first revisit the ToRs 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).

: Link
: Link

: The Sub TF 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.

: Session 1 on 18 May, Session 2 on 22 May

: 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.

: Link

: 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 to the monitoring framework.

: Link
: Link

: 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.

Link

: 1st 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.

: Link
: Link

: 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")

: Link
: Link

: 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 workplan.

: Link
: Link

: 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 prioritize 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

: The 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 the importance of raising the profile

and information on the need to invest in monitoring approaches and related capacity development for these ecosystems. Members were invited to partner, mobilize resources, organize events, and bring visibility to this work area to ensure a greater impact.

: Link

: The third meeting of the sub-task force on socio-economic indicators provided the results of the literature review for the identification of socio-economic domains related to aquatic and transitional ecosystems and presented the final proposal of the SDGs indicators prioritized for the FERM.

: Link

: The seventh meeting of the Task Force on Monitoring, attended by 52 TF members, focused on updating TF members on the work of the FERM, gathering feedback on the global indicators for monitoring progress of the UN Decade based on SDGs, the project information sharing framework, and an update on the interactive tools report. The meeting also featured updated presentations on the FERM geospatial platform and the FERM registry. Members of the TF exchanged information and shared updates, including on a webinar on Freshwater, and on upcoming reports.

: Link
: Link

: The first Working Group meeting was attended by 13 members from FAO, IUCN, UNCCD and UNEP-WCMC. As the custodian agency of headline indicator 'Area under restoration', FAO has prepared a draft information note on monitoring suggestions. The document was circulated and discussed. Key questions on definitions, workflow, baseline and the CBD negotiation processes were raised.

: Link

: The second meeting welcomed new members from the International Coral Reef Initiative (ICRI). Suggestions from the previous meeting were incorporated in the draft information document (referred to as the Zero Draft). The document was shared with the 4th meeting of the Open-Ended Working Group (Nairobi, 21-26 June 2022), and the technical meeting in Bonn (29 June - 1 July 2022).

: The third meeting was attended by 15 members virtually. A draft methodology with proposed workflow and parameters was prepared and presented to the group. Most of the meeting dealt with definitions and terminology. It was also proposed the initiation of practical and real cases to find bottlenecks in the

methodology. Feedback from OEWG-4 and the Bonn meeting was discussed. The group also brainstormed on restoration-themed side event for CBD COP15.

: The eighth meeting of the Task Force on Monitoring, attended by 66 members, focused on the progress made towards monitoring and reporting on CBD post-2020 Global Biodiversity Framework Target 2 (area under restoration). The meeting also featured new functionality of the FERM registry, including documenting good practices and GEF projects. Partners also shared updates in a series of short presentations.

: Link
: Link

: This Working Group meeting aimed at preparing for CBD COP15. The draft methodology and the information note (Zero Draft) were merged into one document and consulted. The final formulation of Target 2 was expected to be adopted during COP15 by Parties.

: The first Working Group meeting of 2023 aimed at communicating relevant decisions of COP15 and proposing a plan for revising the draft guidance. A short document was shared with the working group before the meeting to serve as an outline to collaboratively gather feedback. 25 members from FAO, CBD, UNEP-WCMC, IUCN, SER, Ramsar, UNFCCC, ICRI and CLLC attended the meeting.

: Link

The 9th meeting of the Monitoring TF was held during the GFOI Plenary 2023. It provided a valuable opportunity to communicate progress being made by countries on ecosystem restoration and the role their monitoring systems are playing in enabling this.

: Link
: Link

: This meeting is an opportunity for members to share knowledge on the latest developments and innovations in ecosystem restoration monitoring. Presentations will be provided by CBD, AFR100, WRI and Restor about their latest developments.

: Link

: The first Freshwater Experts Working Group meeting brought together experts to enhance support for freshwater reporting towards Target 2 of the Kunming-Montreal Global Biodiversity Framework (KM-GBF). The meeting focused on providing methods for measuring and understanding what areas under restoration mean for freshwater ecosystems. It covered background information on the UN Decade and Target 2 of the KM-GBF, provided updates on SBSTTA, shared the latest on Target 2 Indicator 2.1, featured presentations on the IUCN GET, and introduced the Framework for Ecosystem Restoration Monitoring. The goal was to gather feedback on freshwater ecosystem restoration reporting and facilitate discussion among participants.

: Link

: The eleventh meeting of the Task Force on Monitoring, attended by 47 members, provided insight into recent activities focused on the progress towards monitoring the Kunming-Montreal Global Biodiversity Framework, Target 2 indicator on areas under restoration, and new improvements in the Framework for Ecosystem Restoration Monitoring. The meeting covered progress made in the T2 Methodology and Resource Manual, updates from SBSTTA and SBI, a case study from Burkina Faso, updates on FERM functionalities and the search engine, and feedback from the Freshwater Experts Working Group meeting. The meeting provided comprehensive updates, gathered feedback, and fostered discussions on enhancing ecosystem restoration monitoring efforts. Followed by a call for presentation proposal for the next TF meeting.

: Link
: Link

Events/Webinars:

The Framework for Ecosystem Restoration (FERM), designed to monitor and report on the progress of restoration efforts throughout the duration of the UN Decade on Ecosystem Restoration, launched a MVP (Minimum Viable Product) version of the Registry and a full update of the geospatial platform at the World Forestry Congress session. A publication describing 20 headline indicators for monitoring the UN Decade at the global level, identified through an extensive consultative process, was launched and is now available in the FERM platform. A roundtable of key partners at the session (IUCN, GRO/Climate Focus, World Economic Forum/1t.org, Restor, Unilever, FAO Kenya, ICRAF) from the Monitoring Task Force, represented the collaborative effort to establish a monitoring framework.

: English | French | Spanish | Korean

At this side event, the draft methodology for reporting on CBD Target 2 will be launched, the first systematic, transparent framework for collecting area-based information on restoration in all ecosystems. The Task Force on Monitoring, in collaboration with CBD, GRO, ICRI, IUCN, Ramsar, SER, UNCCD and UNEP-WCMC, has developed methodological guidance for monitoring progress for Target 2, based on existing reporting frameworks and platforms. New developments in the Framework on Ecosystem Restoration (FERM) will be presented that integrate the collection of restoration activities and best practices, and upcoming functionality to connect directly with restoration practitioners on the ground.

The primary objective of the November 21st, 2023, meeting was to facilitate an exercise aimed at improving data and platform interoperability among different systems responsible for collecting restoration data and mapping. This exercise specifically focused on aligning these efforts with the parameters outlined by Target 2. Key agenda items included mapping existing sources of restoration data, developing guidelines for restoration databases to effectively collect data on areas under restoration, mapping data parameters, and defining next steps and timelines for implementation.

: Link

FAO, in collaboration with the Secretariat of the Convention on Biological Diversity and the United Nations Environment Programme, co-hosted a technical workshop focused on developing a roadmap for supporting ecosystem restoration under the Kunming-Montreal Global Biodiversity Framework at FAO headquarters in Rome from November 22nd to 24th. Over the course of three days, more than 100 participants came together to engage in discussions covering a wide range of topics, including progress and alignment between the UN Decade on Ecosystem Restoration and the Kunming-Montreal Global Biodiversity Framework adopted under the CBD, unpacking Target 2 of the Framework, transparent monitoring, large-scale restoration commitments, stakeholder inclusion, capacity needs, and financing. The meeting aimed to foster collaboration, share insights, and develop a roadmap for effectively planning and implementing the Global Biodiversity Framework Target 2.

: Link

The International Day of Forests session on

Restoration and Innovation, held on March 21st, 2024, spotlighted the important role of technological advancements in driving ecosystem restoration forward as a potent solution to global challenges. With commitments to restore approximately 1 billion hectares of land worldwide, the session on restoration emphasized the importance of Innovation is advancing ecosystem restoration as a powerful nature-based solution to multiple global challenges. Key highlights included presentations on the UN Decade and FAO's collaborative innovation, a Ted talk-style presentation on how Restor utilizes technology to engage a broad community in restoration and its collaboration with FAO, collaborative effort with IUCN, discussions on working with communities for restoration innovations on the ground.

: [Link]

22-26 April 2024 - National Dialogue for the KM-GBF Target 2 on Ecosystem Restoration in Burkina Faso

The main objective of this National Dialogue was to understand the status of the country concerning the implementation of NBSAPs including alignment with the KM-GBF, Target 2, and NBSAP target setting; identification of relevant government agencies and stakeholder groups responsible for implementing the KM-GBF; assessment of the alignment of national indicators and Target 2; and revision and update of indicators to set national restoration targets. Around 30 participants from different Burkina organisms contributed to the workshop, including the Ministry of Environment and the main agency that collects restoration data. It contributed to identify majors' gaps and opportunities, including further discussion required on the definition of "restoration", and potential indicators to inform on Target 2 within the national indicator framework. Opportunities for stronger interoperability between the national data system and existing initiatives (FERM and AFR100) were also identified, as well as the need for coordination across government on data exchange and collection.

An important webinar, co-organized by FAO and the UN Decade on Ecosystem Restoration, gathered experts from around the world to address the opportunities and challenges in quantifying 'area under restoration' for aquatic (marine and inland) ecosystems under Target 2 of the Global Biodiversity Framework (GBF). With 805 registrants from 107 countries, this session aimed to bring on-the-ground experience to the development of strategies for consistent global reporting on aquatic restoration efforts.

: [http://link/]

–

The FAO-led UN Decade Task Forces on Best Practices and Monitoring held a meeting on Thursday, 9 May, from 14:00-15:30 CET, inviting Advisory Board members to provide advice on their ongoing efforts and potentially support them based on your expertise and interest. The session included updates on ongoing efforts of the Task Force on Monitoring such as CBD Target 2 and the Framework for Ecosystem

Restoration Monitoring (FERM), with opportunities for feedback and engagement throughout the meeting.

[Link]
[Link]

The SBSTTA convened in Nairobi to address the scientific and technical needs required to support the implementation of the Kunming-Montreal Global Biodiversity Framework.

: [Link]

The Global Environmental Facility (GEF) regional workshop was designed to introduce the FERM to Project Coordinators, Country Office Focal Points, LTOs, GTOs, Technical Staff, GIS, and Monitoring Experts. These workshops will present FERM, discuss the context of its development (the United Nations Decade for Ecosystem Restoration and KM-GBF Target 2), and demonstrate its usage and functionalities. The training in English took place on 14 May 2024 at 2 PM Rome time.

: [http://link/]

In Hanoi, Vietnam, a workshop on Ecosystem Restoration was held from June 26-28, 2024, in collaboration with the Ministry of Agriculture and Rural Development to align efforts in operationalizing Target 2 of the Global Biodiversity Framework (GBF). Key objectives included introducing the Target 2 Resource Guide, training on the Framework for Ecosystem Restoration Monitoring. Participants discussed tools for accurate monitoring and reporting, identified challenges and capacity gaps, explored ecosystem typologies and restoration planning, and addressed funding gaps. The event also focused on improving data interoperability, collecting feedback on restoration datasets, and developing case studies and capacity-building proposals for future action.

The National Dialogue for the KM-GBF Target 2 on Ecosystem Restoration allowed for a collective and frank reflection on the challenges and opportunities for the effective implementation of KM-GBF Target 2 in Peru. It contributed to consolidating interest and action points for a national restoration roadmap to guide the country's restoration efforts in restoring 3,2 Mio ha of degraded land. The state of ecosystem degradation in

the country amounts to 19 million degraded hectares by 2022, of which 3.2 million hectares correspond to the ecosystem recovery gap, which includes restoration, rehabilitation, remediation and other complementary actions. Participants agreed on the need for multi-sectoral and multi-stakeholder articulation, and the joint construction of a permanent space for multi-stakeholder articulation to support decision-making processes for the implementation of restoration objectives in the country.

The Kenya National dialogue on Ecosystem Restoration and Kunming Montreal Global Biodiversity Framework Target 2 was a three-day workshop focused on various presentations, breakout groups, and discussions towards achieving the workshop objectives. Presentations covered Target 2's objectives, alignment with the UN Decade on Ecosystem Restoration, and Kenya's approach to integrating these targets into the National Biodiversity Strategy and Action Plan (NBSAP). A panel discussion explored the next steps for implementing Target 2, emphasizing cross-sectoral collaboration and the integration of various ministry processes.

–

The Department of Forests (DFLO/SBIO) of Brazil's Ministry of Environment and Climate Change (MMA), in partnership with the CBD and FAO, organized a technical-scientific workshop, supported by the Observatory for Restoration and Reforestation and other partners. The event brought together government, academia, and civil society to share experiences on monitoring native vegetation recovery, discuss innovative methodologies, and explore how this data supports Brazil's national and international commitments, including Target 2 of the KM-GBF and the PLANAVEG target of restoring 12 million hectares by 2030. Participants emphasized the need for swift progress, particularly in addressing the complexities of non-forest biomes. A collaborative approach, aligned concepts, and enhanced monitoring data were highlighted as priorities. Resuming similar events was seen as key to accelerating progress.

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 Task Force convenes virtual expert

        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. Matchmaking 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.

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.

: Link
: Link

: The second session, in contrast to the first session held in March, highlighted perspectives and challenges of restoration monitoring from clients or users of tools and platforms. With the aim of contributing to the upcoming UN Food Systems Summit discussion as well as developing an interactive digital report on tools as concrete outcomes, the session featured; presentations on the UNFSS solution cluster 3.3.2 on Aligning Data, Stakeholders and Evidence for Nature- Positive Production, a visualization of tool mapping database created by tentree & veritree, and perspectives on challenges and opportunities in restoration monitoring by FAO Kenya, Mastercard and Lebanon Ministry of Agriculture. Participants were invited to provide input to the digital interactive report in breakout discussion sessions, moderated by WRI and Climate Focus/GRO. In total 67 TF members and invited speakers participated in the workshop.

: Link
: Link

C. The concept of the FERM

9. The FERM is an operational framework for monitoring progress on ecosystem restoration to build trust and momentum for the UN Decade. The FERM enables 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

further acts as the primary place for the latest and most up-to-date data and methodologies in support to restoration practitioners, with linkages to innovative platforms to support restoration monitoring and acting as an umbrella. It capitalizes on partnerships 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. FERM is an umbrella framework for tracking the progress of efforts to restore degraded ecosystems in the context of the UN Decade. It will be the basis for selecting key indicators for the reports on the UN Decade to the UN General Assembly at its 81st session; and periodic update reports to the High-Level Political Forum; and for the final report on the UN Decade in 2030.

11. The FERM platform provides an integrated technical solution for restoration monitoring and reporting including a geospatial dissemination platform that will provide a wide range of restoration stakeholders with access to up-to-date and detailed geospatial data across ecosystems as well functionality to share their own restoration progress through the FERM Registry.

12. 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.

13. The FERM is primarily 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)

14. 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 (Minimum Viable Product) FERM platform was launched on the 3rd of June (landing page: http://www.fao.org/national-forest-monitoring/ferm). The platform is designed in a way 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. 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 being addressed. Integration and harmonization with other platforms such as Restor is under development.

15. 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. Outreach

16. The Monitoring TF members have convened meetings and engaged in bilateral discussions with many key stakeholders to enhance collaboration and avoid potential duplications. The list of TF members and their affiliated organizations can be found at the end of this document.

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

a. FAO Seminar on "Healthy ecosystems for healthy life: the UN Decade on Ecosystem Restoration 2021-2030" (22 April 2020)

b. UNEP and FAO webinar on the UN Decade of Ecosystem Restoration (28 May 2020)

c. UN-REDD blog post: "Building a holistic monitoring framework for ecosystem restoration" (9 June 2020)

d. 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 October 2020)

e. Web story on FAO REDD+ website – "Advancing ecosystem monitoring during the UN Decade for Ecosystem Restoration" (23 December 2020)

f. FAO video: "Introduction to the FERM Platform" (3 February 2022)

g. GRO publication: Restoration Project Information Sharing Framework (March 2022)

h. WRI's Restoration Monitoring Tools (March 2023)

i. Land & Carbon Lab's 2023 Summit Conference (27-29 June 2023)

j. Seventh GEF Assembly Side Event - FAO's Innovative Knowledge-Based Solutions: Enhancing Monitoring, Transparency, and Decision-Making in the Era of Big Data and Earth Observation (22 August 2023)

k. Workshop on ecosystem restoration-related planning and capacity-building needs for the implementation of the Kunming-Montreal Global Biodiversity Framework was carried out (September 2023 Link)

l. SER Conference 2023 (29-30 September 2023)

m. Sustainable Investments for Large-Scale Rangeland Restoration (STELARR) - Global Rangelands Data Platform Meeting (25 October 2023)

n. Webinars on the guidance from the AHTEG on indicators for the Kunming-Montreal Global Biodiversity Framework: [Monitoring restoration for indicator 2.1 and for the UN Decade on Ecosystem Restoration](#) (17 April 2024)

o. Symposium on "Restoration Monitoring Strategies: Advances and Challenges for the Integration of National and Global Platforms" at the 5th Brazilian Conference on Ecological Restoration (09 July 2024)

p. 9th World Forest Week event "Empowering communities, restoring landscapes & conserving ecosystems - Diverse partnerships, innovative results" (24 July 2024)

q. 14th European Conference on Ecological Restoration (26–30 August 2024)

r. Landscape monitoring accelerator workshop (26–30 August 2024)

s. Regional Symposium on Good Forest and Landscape Restoration (FLR) Practices in Afghanistan (23 – 24 September 2024)

Collaboration and Partnership

Important cooperating partners include: • United Nations Environment Programme (UNEP) • Convention on Biological Diversity (CBD) • Society for Ecological Restoration (SER) • Center for International Forestry Research and World Agroforestry (CIFOR-ICRAF) • World Resources Institute (WRI) • African Union Development Agency-NEPAD (AUDA-NEPAD) • International Union for Conservation of Nature and Natural Resources (IUCN) • United Nations Convention to Combat Desertification (UNCCD) • Spatial Informatics Group (SIG) • Duke University • Restor • SEPAL (FAO) • SilvaCarbon • NASA-SERVIR • GEF unit (FAO) • United Nations Framework Convention on Climate Change (UNFCCC) • United Nations Development Programme (UNDP) • UN Environment Programme World Conservation Monitoring Centre (UNEP-WCMC) • Ramsar Convention • System of Environmental Economic Accounting (SEEA) • Conservation International (CI) • World Wildlife Fund (WWF) • International Coral Reef Initiative (ICRI) • Brazilian Restoration and Reforestation Observatory (BRRO)

Task Force members and affiliated organizations

As of 18 October 2024, the Monitoring TF has a total of 433 members from 150 organizations (including independent category) in the contact list. Below is a list of organizations the TF members are affiliated:

4 per 1000 Initiative	2	HappyFarm Global	2	Tentree	2
Adatos	1	Helsinki Institute of Sustainability Science (HELSUS)	1	The James Hutton Institute	1
AFR100	1	Hokkaido University	1	The Nature Conservancy (TNC)	4
African Conservation Foundation	1	Horticulture Association of Bhutan	1	Trees for the Future	1
African Union Development Agency-NEPAD (AUDA-NEPAD)	2	IFAD	1	UK Centre for Ecology & Hydrology	1
Alliance of Bioversity International and CIAT	1	IHE Delft Institute for Water Education	1	UN SEEA	1
Amazon Connection Carbon	5	Independent	3	UNCCD	1
AMERE	4	Institute for Regional Conservation	1	UNCCD Secretariat	4
Bangor University	1	Intergovernmental Panel on Climate Change (IPCC)	1	UNDP	4
Biodiversity International	1	International Coral Reef Initiative (ICRI)	2	UNEP	21
BirdLife	1	International Fund for Agricultural Development (IFAD)	5	UNEP-WCMC	8
BrCarbon	2	International Renewable Energy Agency (IRENA)	1	UNFCCC Secretariat	4
British Trust for Ornithology	2	International Union for Conservation of Nature (IUCN)	9	Unilever	1
Bush Heritage Australia	1	International Water Management Institute (IWMI)	2	United Nations University (UNU)	1
Care for Ecosystems UG (CfE) / International Mire Conservation Group	1	JUST ONE Tree	3	United States Geological Survey (USGS)	1
CBD Secretariat	7	Kalkal Human Rights Development Organization (KAHRDO)	3	University of Bonn	1
Center for International Forestry Research (CIFOR)	10	Kiss the Ground	1	University of California, Davis	1
Chinese Academy of Forestry	1	Laotu Rural Ecological Culture Service Group	2	University of Cambridge	2
CIFOR-ICRAF	6	Lestari Capital	1	University of Copenhagen	1
Climate Focus / Global Restoration Observatory (GRO)	3	Luke	3	University of East London	1
CONCAVE SUMMIT	2	Mott MacDonald	1	University of Greifswald	2
Conservation International	8	mundialis GmbH & Co. KG	1	University of Hull	1
Deltares	2	Murdoch University	1	University of Leeds	2
Earth Care Ghana	1	n.a.	11	University of Leicester	1
Earthmind	1	National Institute of Aeronautics and Space, Indonesia (LAPAN)	1	University of Maryland (UMD)	1

Eco-Innovation Foundation	1	NEPAD	1	University of Melbourne	1
Ecologia Research Institute - IPE	1	Nova Mata	1	University of Montana	1
Economic Commission for Latin America and the Caribbean (ECLAC)	1	Observatoire du Sahara et du Sahel (OSS)	2	University of New South Wales	1
Ecosystem Restoration Camps	1	Observatorio	1	University of Oxford	1
ETH Zurich	7	Open Forest Protocol	3	US Forest Services	1
European Commission	1	PBL Netherland Environmental Assessment Agency	2	USAID	1
European Environment Agency	1	Plan Vivo Foundation	4	ViridisTerra	1
European Investment Bank	1	Planet	2	Wageningen	1
European Space Agency	1	Plant for the planet	1	Wageningen University & Research (WUR)	2
European Space Agency (ESA)	4	Prameya Foundation	3	WeForest	2
Eurosite	2	Preferred by Nature	4	Wetlands International	3
FAO	84	Ramsar Secretariat	5	Wildlife Conservation Society (WCS)	1
Forestry Research and Development Agency, Jakarta (FORDA)	1	re.green	4	Winrock International	1
Forestry Research Institute of Nigeria (FRIN)	1	Red de Restauración Ecológica de la Argentina	2	WOCAT / University of Bern	3
Forests Ontario	1	REFORESTUM	4	World Bank	2
Fundação SOS Mata Atlântica	4	Restor	4	World Economic Forum (WEF)	2
Ghent University	1	Riau Ecosystem Restoration	1	World Health Organizatino (WHO)	1
GIZ	8	ROYAL SOCIETY FOR THE PROTECTION OF BIRDS	1	World Resources Institute (WRI)	12
Global Adaptation Network (GAN) - UNEP	2	RSS - Remote Sensing Solutions GmbH	2	World Wildlife Fund (WWF)	4
Global Environmental Centre	2	SADIL – TOGO	2	WorldVision	1
Global Forest Generation	2	SarVision	2	Yale University	1
Global Forest Observations Initiative (GFOI)	1	Satelligence	1		
Global Green Growth Institute (GGGI)	3	Smithsonian	1		
Global Mangrove Alliance	3	Society for Ecological Restoration (SER)	1		
Good Energies	1	Southern African Science Service Centre for Climate Change and Adaptive Land Management	1		
Government of Columbia	1	Succow Stiftung	1		
Greifswald Mire Centre	3	Technical University of Munich	1		