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|  | **A black background with red and blue text  AI-generated content may be incorrect.** |  |
|  | **Output 1.1: National Forest Monitoring Systems, and Measurement, Reporting, and Verification consolidated with Environmental Integrity** |  |
|  | **UN-REDD Multiyear Programming Document 2026–2030 Illustrative Support Overview** |  |
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|  | **Prepared by UN-REDD Programme**  **June 2025** |  |
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|  | *This brief has been prepared by the UN-REDD Programme team based on preliminary analysis, internal assessments, and strategic insights from prior engagements and consultations. It is intended to provide illustrative information on potential areas of UN-REDD support for the 2026–2030 period. The content, including indicative budgets and activities, is for donor engagement purposes only and has not yet been discussed or consulted with the respective country authorities. As such, it does not represent an official position or commitment from the country concerned or from the UN-REDD Programme.* |  |

# Output 1.1: National Forest Monitoring Systems, and Measurement, Reporting, and Verification consolidated with Environmental Integrity

**This is one of three outputs forming Outcome 1: Demonstrating High-Integrity REDD+ Results:** *Consolidating, institutionalising, and updating forest monitoring and MRV, and safeguards systems, in line with country approaches (e.g. nesting models), supporting countries to demonstrate the integrity of results, results-based finance, and socially inclusive and gender-responsive benefit-sharing mechanisms.*

# The challenge

Over the last 25 years, there have been substantial improvements in national forest monitoring capacities across the globe. However, the status of National Forest Monitoring Systems (NFMS) and Measurement, Reporting, and Verification (MRV) continues to vary significantly across countries. While many forest countries have made important strides, key challenges remain in terms of institutional consolidation, system integration, and long-term sustainability.

* NFMS are now operational or partially established in most forest countries, often supported by open-source platforms under FAO’s Open Foris initiative such as SEPAL. These technical solutions, provided by FAO and partners, have enabled countries to access and process high-resolution satellite data alongside national and subnational information.
* Countries that have accessed carbon finance through the FCPF Carbon Fund of ART-TREES—have typically developed more advanced MRV to meet stringent reporting standards.
* Nonetheless, **institutional fragmentation and coordination gaps** between forestry, environmental, and statistical agencies continue to hinder implementation. In many contexts, the **recurrent costs** of maintaining permanent technical staff and infrastructure remain a barrier to system sustainability.
* Where countries have delegated some monitoring functions to third parties—such as subnational agencies or Indigenous Peoples and local communities—this has often supported capacity development and territorial management at the local level.

As REDD+ evolves, so too does the complexity of MRV. It is no longer a time-bound readiness activity but a **continuous cycle of technical and institutional strengthening**. Evolving requirements under multiple initiatives—including the Warsaw Framework for REDD+, donor programs (GCF, LEAF, FCPF), and emerging carbon market standards—require countries to make **progressive improvements** to existing systems. These improvements are no longer optional: they are **prerequisites** for securing international support and maintaining credibility.

Between now and 2030, MRV systems will become even more critical for four key reasons:

1. **Compliance with the Paris Agreement is entering a decisive phase.** As countries move deeper into the implementation period of their Nationally Determined Contributions (NDCs), they must demonstrate the **transparency and integrity of their emission reductions**—a requirement already formalized under the Enhanced Transparency Framework (ETF). [relates and contribute to output 3.2]
2. **Access to climate finance increasingly depends on MRV with Environmental Integrity.** Funding from multilateral funds, voluntary markets, and bilateral agreements is tied to the availability of **credible, verifiable forest, land use, land use change and related emissions data**, including for REDD+ and land-use mitigation programs.
3. **Monitoring systems are essential for informing public policies and incentives.** Reliable data enables governments to understand the impacts of policy interventions, allocate resources more effectively, and align forest conservation efforts with broader development priorities.
4. **Monitoring demands are expanding—not only for climate, but also for biodiversity and restoration.** The Kunming-Montreal Global Biodiversity Framework (GBF) introduces new expectations for countries to report on ecosystem condition and restoration under Target 2. Yet:
   * Over **80% of countries currently lack the capacity** to collect required restoration data.
   * **70% report institutional coordination gaps**, and
   * **All countries** express the need for tailored support to interpret global guidance in national contexts. These gaps highlight the urgent need to build **interoperable national systems** that link forest cover change, degradation, and restoration metrics across climate and biodiversity domains.

Even as global data systems and private analysis firms expand, **national NFMS and MRV capacities remain critical**. Country ownership—anchored in strong central coordination and oversight—is essential to ensure data credibility, meet international transparency requirements, align with national policy cycles, and access climate finance with integrity.

The road ahead will require countries to **institutionalize MRV within national systems**, link it to planning and budgeting processes, and **contain the rising costs of system maintenance and data acquisition**. This includes aligning monitoring efforts across climate, biodiversity, and land governance objectives—recognizing that the same systems and data can often serve multiple policy frameworks.

Addressing these challenges will require sustained technical support, predictable finance, and strong regional cooperation. UN-REDD will continue to assist countries in navigating these demands—helping them develop MRV systems with Environmental Integrity, and design funding proposals that meet the standards of a rapidly evolving climate finance landscape.

# The value proposition

Addressing the growing demand for MRV with Environmental Integrity will require sustained technical support, predictable financing, and stronger regional cooperation. UN-REDD is uniquely positioned to meet this demand, offering trusted, long-term assistance to countries in developing their MRV systems, preparing emissions reduction submissions, and designing funding proposals aligned with the evolving landscape of climate and biodiversity finance.

Since its inception in 2008, UN-REDD and its agencies (including through external yet coordinated projects, e.g [SEPAL](https://sepal.io/) or collaboration with WB FCPF) has been a leading provider of in-country technical support, helping countries fulfil REDD+ requirements and access results-based finance. This includes the development of over **65 national forest monitoring systems**, the submission of more than **29 forest reference emissions levels (FRELs)**, and contributions to national REDD+ strategies and action plans. Thanks to such support, countries like **Ghana, Indonesia, and Colombia** have successfully accessed results-based payments by reporting verified emissions reductions.

UN-REDD agencies have also played a pivotal role in shaping global MRV systems and enabling access to multiple REDD+ and carbon finance mechanisms. This includes:

* Supporting **~70% of the 100 FRELs** submitted to the UNFCCC.
* Assisting **50% of the 24 countries** that submitted REDD+ results to the UNFCCC.
* Contributing to **~1/3 of LEAF proposals** submitted to Emergent.
* Supporting **~50% of ART-TREES Concepts** submitted.
* Assisting **11 of the 12 countries** submitting concept notes to the GCF RBP pilot programme.

Providing MRV support to Ghana, enabling it to secure payments from the **FCPF Carbon Fund**, submit ART-TREES monitoring reports, and sign an ERPA under the **LEAF Coalition**.

UN-REDD’s comparative advantage is grounded in its:

* **Trusted technical teams** with long-term presence and embedded collaboration with national institutions.
* **Proven track record**, including direct support to over half the countries submitting REDD+ results globally.
* **Neutral and initiative-agnostic approach**, allowing for flexibility across different carbon and climate finance standards.
* **Dual support model**, balancing long-term capacity development with countries’ short-term transactional needs.
* **Expertise in integrity standards**, spanning the UNFCCC, GCF, ART-TREES, and voluntary market initiatives.

Responding to an evolving and demanding context, countries and global stakeholders need to count on **advanced MRV.** UK-funded UN-REDD affiliated initiatives, such as **AIM4Forests** and **AIM4NatureRestoration,** are leading the way in this regard developing and constantly improving technical solutions for advanced MRV demonstrating high environmental integrity and supporting innovation in monitoring forest degradation, restoration progress, and biodiversity outcomes.

These affiliated initiatives are:

* Developing **interoperable information systems** that serve both climate and biodiversity objectives.
* Addressing **key methodological gaps**, including monitoring of forest degradation and sampling uncertainty.
* Performing **technical and institutional gap assessments** providing countries with a strategy to access climate finance and institutionalize their NFMS.
* Piloting **Indigenous-led monitoring approaches** and expanding support for ecosystem restoration reporting under the Kunming-Montreal Global Biodiversity Framework.

These efforts reflect a shift from compliance-oriented monitoring toward more integrated systems that support national planning, accountability, and learning—across climate, forest, biodiversity, and development priorities.

This work is further reinforced by **strategic partnerships** with key institutions and knowledge providers, including the World Bank (FCPF, BioCF), GCF, UNFCCC, ART, GIZ, JICA, CIRAD, WRI, GFOI and academic institutions.

Building on the technological solutions and methodological expertise created under the AIM4Forests programme, UN-REDD can help deploy these solutions in-country, taking advantage of the deep and systemic anchorage of UN-REDD with countries institutions and stakeholders. As such, UN-REDD can make monitoring systems enduring pillars of national climate and biodiversity policy, transparency, and finance readiness.

# Scenarios

Between now and 2030, UN-REDD will consolidate, strengthen, and support the national forest monitoring systems and MRV. The goal is to ensure that countries not only have access to the latest technologies and methods but also have the institutional and human capacities to maintain, govern, and use these systems effectively.

Under Output 1.1, UN-REDD will support countries in leveraging NFMS data and platforms to inform evidence-based policy formulation, national dialogues, and strategic choices—particularly related to mitigation strategies, carbon crediting, and trade-offs in land-use decision-making. UN-REDD will support governments to be equipped with the necessary data and analyses to align their NFMS and MRV related systems with national development and climate goals.

UN-REDD will support partner countries—particularly those currently lacking operational NFMS—to establish **technically robust**, **transparently governed**, and **policy-relevant monitoring systems**. These systems will be capable of supporting REDD+ results submissions, accessing high-integrity climate finance, and integrating climate, biodiversity, and adaptation reporting under international frameworks like the UNFCCC and CBD. Support in this area will also be consistent and aligned with the requirements of potential financing mechanisms such as the Tropical Forest Forever Facility (TFFF).

This transformation will be supported through a phased and adaptive delivery model, grounded in strong country demand and knowledge exchange, building on the technical solutions created by the AIM4Forests programme, including the new AIM4Nature component, and incorporating innovations emerging from this programme. The activities indicated below are intended to enable specific knowledge products and tools to facilitate and complement country level activities. They are complementary to ongoing and planned work under AIM4Forest.

| **Deliverables** | **Types of Activities** |
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| 1. Support consolidation and sustainability of NFMS capacities for various purposes, including access to carbon finance | 1. Complement AIM4F with in-country capacity building on MRV and support countries to get access to climate finance 2. Identify lessons learned and support south-south exchanges on these issues |
| 1. Increase relevance and use of monitoring data to inform policy decisions | 1. Provide technical assistance to align monitoring systems with national planning and reporting frameworks (also as a potential link to support access to TFFF) 2. Identify lessons learned and support south-south exchanges on these issues |
| 1. Support countries in aligning climate mitigation with biodiversity and adaptation agendas for integrated monitoring and reporting. | 1. Provide technical assistance to align monitoring systems for climate, biodiversity, and adaptation 2. Build capacity to assess biodiversity and adaptation benefits/losses from deforestation, aligned with NDCs, NBSAPs, and NAPs |
| 1. Explore how MRV data generated can be used by countries to move towards the Enhanced Transparency Framework (link with Outcome 3.2) | 1. Support countries to generate cutting edge forest and land use data to support NDC progress reporting in the BTR and explore support of other reporting streams such as NBSAPs and NAPs |