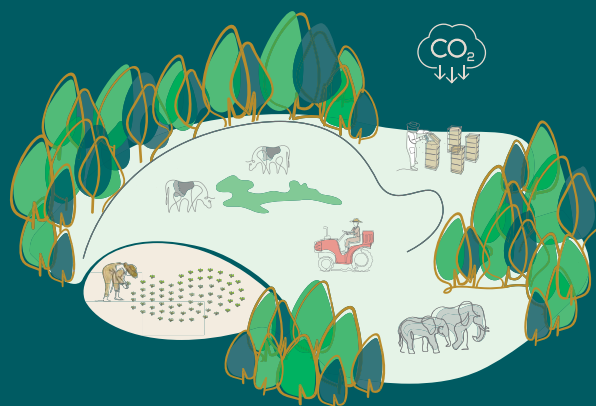


Achieving High-Integrity Carbon Credits: The Role of Robust Measurement, Reporting and Verification in the BioCarbon Fund Initiative for Sustainable Forest Landscapes



The World Bank's [BioCarbon Fund Initiative for Sustainable Forest Landscapes \(ISFL\)](#) plays a vital role in addressing the impacts of climate change by supporting projects that reduce carbon emissions through improved land use, land restoration and sustainable agricultural practices. The ISFL's strong approach to **measurement, reporting, and verification (MRV)** positions the initiative as a robust standard for generating high-integrity carbon credits.

What is MRV?

For ISFL country programs, MRV refers to the multi-step process of **measuring** the amount of carbon emissions reduced from land use over a period of time and **reporting** these findings to an accredited, independent third party. This third party then **verifies** emission reductions so that results can be certified, and carbon credits can be issued.

Why is MRV important?

MRV systems are essential to prove that a mitigation activity has reduced or removed harmful greenhouse gas emissions so that actions can be converted into credits with high environmental integrity.

These systems are essential, but they are also complex. They require multiple steps and cutting-edge technologies, which is why low-income countries often lack the capacity to do MRV alone. For this reason, **MRV capacity building figures heavily into ISFL grants and technical support** to countries to prepare emissions reduction programs.





Measurement

The ISFL has developed, through a consultative process including national and international experts, a methodological framework for measuring emission reductions at a jurisdictional scale related to agriculture, forestry and other land use (AFOLU). The ISFL's methodological framework details how land-use categories of emissions are selected to ensure comprehensiveness.

The methodological framework also lays out an approach for ensuring that all data used to calculate emissions and removals are robust and in line with best international practices. The jurisdictional approach and comprehensive accounting enable emission reductions programs to better capture any risks of displacement of emissions or leakage caused by interventions, resulting in higher environmental integrity.

The objective of this methodology is to ensure that all carbon credits are of a high quality based on robust carbon accounting. Details of this methodological framework are found in the [ISFL Requirements](#).



Reporting

Once data is collected and processed by countries to calculate a baseline and/or emission reductions achieved against the baseline, it is then compiled into a report subject to third-party validation and verification by an accredited entity.

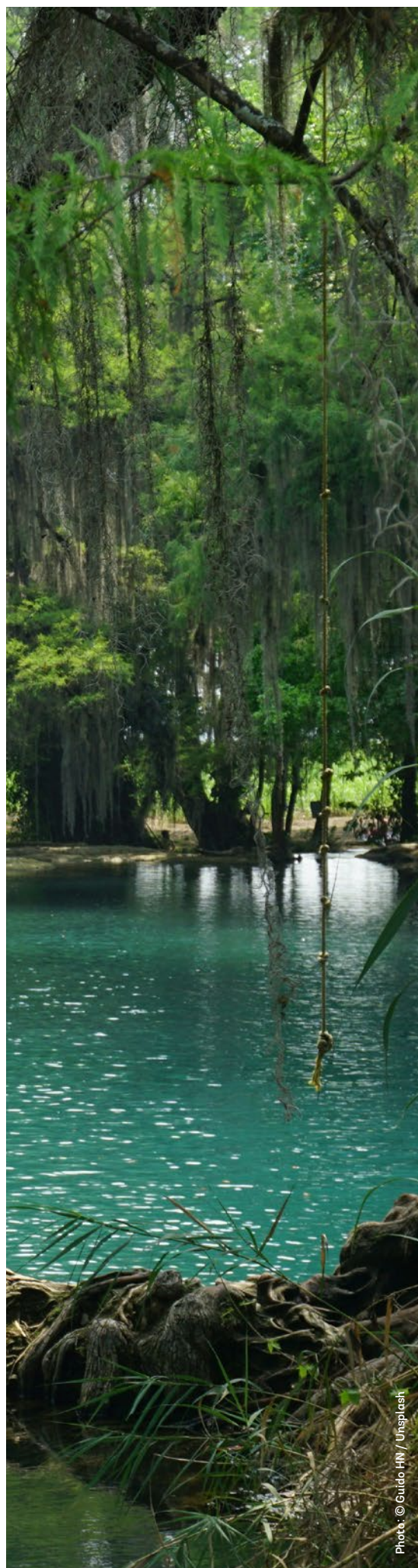
The World Bank has supported program countries' reporting through grant funding and other resources to build capacity for AFOLU emission accounting. This support is helping countries produce robust baseline reports and emission reductions reports.



Verification

The [ISFL Validation and Verification Requirements](#) provide a detailed set of guidelines for accredited validation and verification bodies to follow to ensure ISFL criteria are fulfilled. Working with these requirements, validation and verification bodies review countries' program documents and emission reductions monitoring reports and confirm that these are accurate and compliant with ISFL requirements.

All validation and verification processes are documented and shared on the ISFL website, as are all independent validation and verification reports. Once emission reductions are verified, the World Bank certifies them, signaling to the Bank's [Carbon Assets Tracking System](#) to issue carbon credits.



MRV Beyond Forests: The ISFL Standard

Countries have been working on programs to reduce emissions from deforestation and forest degradation – efforts commonly referred to as REDD+ – for more than 15 years. For the most part, these traditional jurisdictional REDD+ approaches have focused on MRV activities in forests alone. But what countries have learned through these efforts is that **we can't protect forests if we only focus on forests.**

The ISFL's [Requirements](#) go beyond jurisdictional REDD+ to address the underlying causes of deforestation which are often economic activities outside the forestry sector.

This ISFL Standard supports MRV of **all emissions** from agriculture, forestry and other land use (AFOLU), making the ISFL's MRV approach robust and comprehensive. A critical aspect of ISFL's MRV work has been to draw from the inroads REDD+ has made in forest MRV to build up MRV of emission reductions in other land-use sectors.

What does the ISFL Standard achieve?

- ➔ ISFL programs are more likely to catalyze **meaningful and sustained emission reductions** across the entire land-use sector.
- ➔ **ISFL's AFOLU approach to MRV** brings together national forestry, environment, agriculture, energy and finance ministries to tackle emission reductions and sustainable land use in a **holistic way**.
- ➔ **Benefits** from ISFL programs, ranging from increased agricultural yields to payments for ecosystems services, **start to flow even before one carbon credit is sold.**

The World Bank's Carbon Assets Transaction Registry

The ISFL's Emission Reductions Program Requirements specify that countries are required to select an appropriate mechanism to avoid double counting and ensure carbon credits generated under ISFL programs – and paid for by the ISFL – are not used again by any entity for sale or any other purpose.

Verified carbon credits achieved by programs managed by the World Bank are issued in the Bank's [Carbon Assets Tracking System](#) (CATS). Countries wishing to transact these carbon credits with third-party entities can move assets from CATS to a third-party registry, such as the [Verra Registry](#). Whenever a country sells its carbon credits to a third party, the credits are cancelled in CATS after being transferred to a third-party registry.

Through this process, the CATS registry ensures that all credits are issued and transacted to maximize transparency and avoid the risk of duplication.

On the Cutting Edge of MRV Technology

For more than 15 years, the World Bank has partnered with technology leaders, including the European Space Agency, Amazon Web Services, the Global Forest Observations Initiative, and the UN's Food and Agriculture Organization to support countries with the latest in digital technologies for data collection, processing, and quality control in MRV processes.

This work has helped countries expand their use of smart sensors, satellites and drones, cloud computing, artificial intelligence, and blockchain encryption. These technologies are improving efficiency in monitoring and verification for carbon credit issuance, enabling more accurate data collection, streamlining verification processes, and reducing delays in credit generation.

An MRV Approach Focused on Trust

By combining **cutting-edge measurement, rigorous reporting, and independent verification**, ISFL carbon credits aim to provide confidence that the emission reductions generated are contributing to meaningful climate action.

More on MRV for carbon credits

- ➔ World Bank video: [Understanding the Measurement, Reporting, and Verification \(MRV\) of Carbon Credits](#)
- ➔ World Bank Climate Explainer: [What You Need to Know About the Measurement, Reporting, and Verification \(MRV\) of Carbon Credits](#)

Learn more about ISFL emission reductions credits

- ➔ [ISFL carbon credits overview](#)
- ➔ [ISFL's approach to benefit-sharing plans](#)
- ➔ Infographic: [How ISFL Programs Generate Emission Reductions Credits](#)

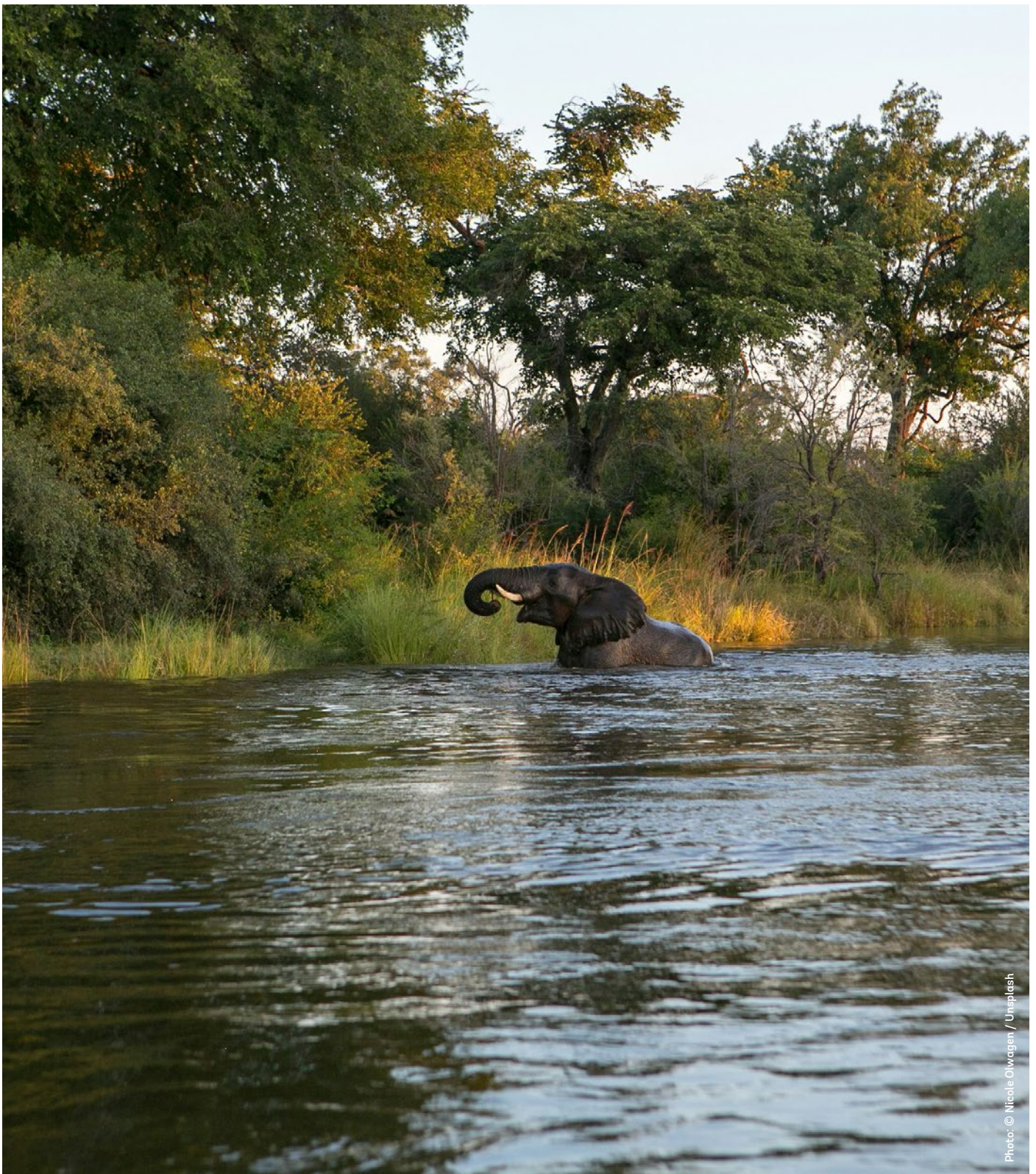


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