

DIGITAL MRV FRAMEWORK

VERSION 3.0

To meet the rising demand for transparent, trustworthy, and scalable carbon markets, the InterWork Alliance (IWA) and Global Blockchain Business Council (GBBC) have collaborated with ecosystem members and stakeholders to refine definitions, address gaps, and deliver Version 3.0 of the Digital Measurement, Reporting & Verification (dMRV) Framework.

The biggest change in Version 3.0 is the introduction of Extension Sets, a grouping of templates which encompasses entities, messages, formulae, and variables that are specific to the Quality Standard or Methodology that the Activity Impact Module is bound to. They are typically composed of multiple MRV Extensions for modules or activities and can be defined by the supplier, verifier, and issuer based on a set of methodology modules. Extension Sets can be organized into Extension Set Modules that act as a shared library of MRV Extensions available to participants in the dMRV process.

Through this process, we aim to create reusable libraries that dMRV participants can use while allowing for the contribution of new Extension Sets from third parties as methodologies are further digitized. Version 3.0 also includes the renaming and grouping of certain data fields for clarity based on feedback received by the IWA from various stakeholders.

View the full document [here](#).

WHY IT IS NEEDED

The dMRV Framework replaces often manual and lengthy processes with a standardized, tech-enabled approach for turning environmental impact into digital assets. It is built to support both nature-based and technology-based projects, while reflecting their very different data realities. The framework lays the foundation for turning environmental actions, like carbon removal or renewable energy generation, into digitally verifiable assets. It offers a standardized, yet flexible, approach that modernizes how projects are validated and verified.

NATURE-BASED VS TECHNOLOGY-BASED PROJECTS

The framework recognizes the distinction between nature-based and technology-based projects and provides the digital infrastructure for both types to coexist under a shared, modular system.

HOW IT WORKS

- **Open Standards:** Shared roles, processes, and data structures allow all project types to issue credits that are consistent and comparable.
- **Tokenized Trust:** Verification events and audit trails are cryptographically recorded and traceable.
- **Modular by Design:** Each credit is backed by a Quality Standard (like a protocol or methodology) and tailored via MRV Extensions.
- **Continuous Verification:** Especially important for technology-based projects, enabling faster and more reliable credit issuance.

WHO IT IS FOR

- **Project Developers:** Can create digital, verifiable claims faster and more efficiently.
- **Corporate Buyers:** Gain confidence in the credibility and traceability of the credits they purchase.
- **Standards Bodies and Registries:** Can integrate existing methodologies into a digitized, future-proof system.
- **Investors and Auditors:** Rely on data-backed claims and digital audit trails to reduce risk and improve transparency

View the technical specification at:

<https://interworkalliance.github.io/TokenTaxonomyFramework/dmr/spec/index.html>

POSITIONING WITH OTHER STANDARDS, FRAMEWORKS, AND INITIATIVES

Name	Type	Purpose	IWA's Complementary Role
CDOP (Carbon Data Open Protocol)	Standards	Aims to create a standardized, open data schema for the pre-issuance phase of carbon projects. Standardizes outputs into a consistent format for registries, crediting programs, and market participants.	Provides the granular, methodology-specific evidence that CDOP consumes and aggregates.
Carbon Standards and Registries (such as Verra, Gold Standard, ACR, etc)	Standards	Defines methodologies and/or issues credits.	Carbon registries and standards bodies benefit from digital extensibility and machine readable formats for methodologies and issuance data.
G20 Sustainable Finance Working Group (SFWG)	Framework	Develops policy frameworks, sustainable finance roadmaps, and standards at a macro-financial level.	Offers the foundation of data integrity and methodology linkage, enabling credible implementation of high-level policy frameworks.
ICVCM (Integrity Council for the Voluntary Carbon Market)	Standards	Defines Core Carbon Principles (CCPs) to set quality standards for credits, crediting programs, and methodologies.	ICVCM's CCPs can be grounded by IWA's methodology-based data attributes.
IETA (International Emissions Trading Association) – Digital MRV Working Group	Initiative	Builds industry consensus for digital carbon market infrastructure.	Provides the technical data foundation to support consensus building.
VCMI (Voluntary Carbon Markets Integrity) Initiative	Framework	Provides a framework for companies to make credible claims about carbon credit use.	VCMI's claims framework is strengthened by machine verifiable proof to support credible corporate claims and disclosures.
World Bank Carbon Markets Infrastructure Working Group	Initiative	Publishes reference papers and policy guidance for digital carbon markets	Reinforces alignment with World Bank Knowledge Hub outputs and provides policy-linked technical building blocks.