

# MRV EXTENSION SETS

## VERSION 3.0

Version 3.0 of the Digital Measurement, Reporting, and Verification (dMRV) Framework introduces targeted but important updates that enhance the framework's usability and scalability. The most significant change is the modularization of MRV Extensions into reusable Extension Sets. This enables third parties to independently digitize methodologies and contribute them back to the framework. This will allow future projects using the same methodology to reuse previously-created Extension Sets, saving time and resources and promoting further interoperability and comparability across the ecosystem.

Environmental assets, like carbon credits, can be originated by the work of many different project activity types. Projects usually fall into either nature- or technology-based projects, or some mixture of the two, by performing activities and presenting evidence of results in radically different ways. Because of this, a project follows a Quality Standard that governs a project's activities and the data they need to produce in order for a credit to be issued. The dMRV Framework supports this diverse set of activities using Extension Sets which allow for the participants in the origination process to define very specific workflows and data schemas to support the project's activities. This, in turn, allows for an implementation of the specification to support a wide range of projects and for those performing the dMRV process to have a customized experience while using the same infrastructure.

### WHAT ARE MRV EXTENSION SETS?

Version 3.0 introduces MRV Extension Sets, a grouping of templates which encompass 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. To support Quality Standards that have multiple modules or phases of a process (e.g., Carbon Capture, Transport and Storage or projects which are making claims related to both soil and water), 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 as a starting place for conversations with registries and other relevant stakeholders while allowing for the contribution of new Extension Sets from third parties as methodologies are further digitized.

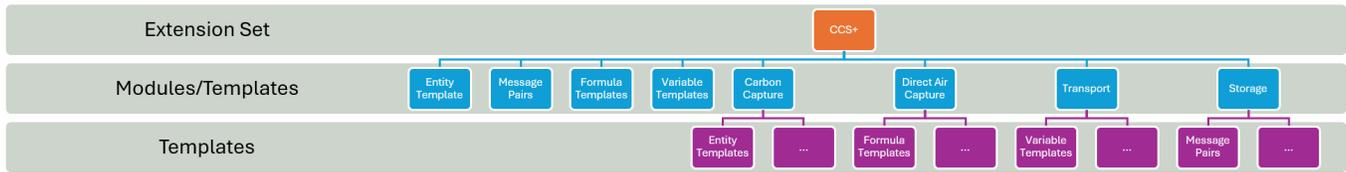
### HOW TO BUILD AND USE EXTENSION SETS

Issuing Registries govern a set of methodologies under their issuing programs for specific types of projects. These methodologies are large documents that describe the process a project must follow in order to have credits issued based on their activities. For example, methodologies use formulae and parameters, or variables, to determine the quantity of credits that will be issued that all the parties involved use to document and verify activity outcomes.

An Extension Set is rooted in these methodology documents and puts it into a digital, machine readable format so that most of the activities in the process can be automated. Extension Sets should be created collaboratively by the supplier, VVB, and Issuer, usually as an iterative process.

Each methodology, or modules of a methodology, is used to extract Extension Templates:

- *Entity Extension Templates* - are data that are needed for an entity, like an Activity Impact Module, that does not exist in the dMRV schema. These extensions allow for the customization of the pre-defined entities in the specification that the methodology requires
- *Formula Templates* - are pulled from the documentation and used to record the formula syntax and additional documentation that is agreed upon by all parties in the dMRV process.
- *Variable Templates* - individual parameters/variables that are used in formulae that represent a data point used in the calculation of the formulae.
- *Message Pairs* - a set of request and response messages that allow for custom workflows to be introduced and recorded in the dMRV process.



Example of MRV Extension Set for CCS+

Each template is given a globally “static” identifier, meaning it will never change, and is then added to the Extension Set or Extension Set Module. Once added, it becomes a registered “type” that all parties in the dMRV process will be able to understand and agree upon. Each template usually contains a custom defined user type where the actual extension data is stored. Templates are essential for establishing these custom data types so that they are understood by all parties in the dMRV process.

Parties in the dMRV process use the templates to create instances that reference their parent template, and record those instances in the dMRV data. When another party wants to read the data, they will use the parent template to understand the instance.

Once an Extension Set is created, it can be contributed back to the IWA where it can exist in a publicly-available repository of other Extension Sets. This contribution must include data, which can be sample data, to allow for testability and show that the input data is properly handled within the Extension Set. This allows for others using the same methodology to more easily re-use the Extension Set as a way to begin conversations with their chosen registry. The IWA has made available a [sample](#) MRV Extension Set and will publish a full implementation example in 2026.

## HOW TO CONTRIBUTE AN EXTENSION SET

Once an Extension Set has completed development alongside the relevant stakeholders, it can be contributed to the IWA’s repository of Extension Sets by issuing a pull request to this folder in the IWA’s GitHub repository: <https://github.com/InterWorkAlliance/TokenTaxonomyFramework/tree/main/dmrv/extensions>

In addition to the Extension Set itself, the submission MUST include:

- The name of all organizations involved in the development of the Extension Set
- A valid email address of the person making the pull request to facilitate any follow-up
- The date the Extension Set was created
- Sample data for users to test the validity of the Extension Set

The IWA will review the Extension Set submission for completeness and to ensure that sample data has been provided. If approved, the pull request will be accepted and the Extension Set will be added to the library. If not approved, the IWA will reach out with feedback on what changes need to be made for the submission to be approved.

## GOVERNANCE AND REUSE STRATEGY

MRV Extension Sets will be contributed as they are developed. It is expected that Extension Sets for different registry programs and methodologies will develop organically and be open-source to encourage reuse and improve overall quality, helping bring both stability and consistency of origination to environmental markets.

Once contributed, the extension sets will be reviewed by the IWA’s working group for completeness and added to the public repository. The IWA will not verify the accuracy of the formulae, variables, entities, or messages contained in the Extension Sets as they are often the product of lengthy conversations between multiple parties. Due to the complexity and differentiation between methodologies and registries, organizations looking to use the Extension Sets to accelerate their development cycles should perform due diligence when using the Extension Sets to ensure alignment with existing registry requirements.