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# Validation-Verification Terms 1.0

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**The Duke Carbon  
Offsets Initiative**  
DUKE UNIVERSITY



**Tomorrow's Climate Solutions**  
Climate Positive Projects, Strategies & Marketing



## Document Compilation

The compilation and editing of these terms is credited to:

- Duke Carbon Offsets Initiative
- Tomorrow's Climate Solutions

## Foundational Definitions

The development of foundational definitions of these terms is credited to:

- International Organization for Standardization (ISO)
- American Carbon Registry (ACR)

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## Essential Terms:

### **Verification**

Evaluation of a carbon offset project for accuracy of calculated net GHG impact and fulfillment of protocol requirements.

### **Validation**

The initial verification is called the validation. Initial project evaluation often prioritizes project boundaries, additionality, and the assessment of information flows.

### **Protocol**

The instructions that detail how a project must be designed and documented to generate carbon offsets

### **Project Description Document (PDD)**

The PDD combines complete project information into one document and is the primary source for validators-verifiers to use in assessing a project.

### **Project Plan**

The initial proposal for the project that must pass an eligibility check from the associated GHG program.

## Full Validation-Verification Terms:

### **Accreditation**

Third-party attestation related to a conformity assessment body (a body that performs conformity assessment services, e.g. a verification/validation body) conveying formal demonstration of its competence to carry out specific certification tasks.

### **Additionality**

A characteristic of carbon offsets asserting that the carbon mitigation would not have occurred in a business-as-usual scenario.

### **Assurance**

Assurance refers to the degree of confidence a VVB can provide that the emission reductions and/or removal enhancements claimed in a GHG assertion are materially correct. ACR requires the VVB to provide a reasonable (as opposed to absolute or limited) level of assurance that the GHG assertion is free of material misstatement and provides a true and fair representation of the project's net GHG emission reductions/removal.

### **Project Buffer**

An amount of the carbon offsets generated that will not be utilized unless the initial source of carbon offsets is compromised. This is typically represented as a percentage of the total offset credits.

## **Carbon Registry**

A program designed by an organization to standardize carbon offset methodologies and verify the generation of credits. Examples of GHG programs include CAR, ACR, Gold Standard, VCS, TCR, and CDM. GHG programs have various levels of stringency in their standards.

## **De Minimis**

De Minimis is a concept that allows for the simplification of project impact calculations. Typically, sources, sinks, and reservoirs of emissions considered within the project boundaries do not require a project impact calculation if they represent 3% or less of the overall project impact. In practice, a back of the envelope calculation should be conducted for all possible sources of emissions. For example, typically the emissions from transportation involved with a volunteer tree planting event would fall within the level of the de minimis constraint and would not require complete accounting.

## **Material Misstatement**

An inaccurate assertion of an offset project's GHG emission reductions/removals, which may be expected to influence decisions or actions taken by the users of the GHG project information. Errors, omissions, and misstatements are considered material if they exceed a defined threshold. Materiality is also used as part of the verification plan design, to determine the type of verification processes to be used by the VVB to minimize the risk of not detecting a material misstatement. ACR's materiality threshold is  $\pm 5\%$  of the GHG project's emission reductions or removal enhancements. To accept a verification statement, ACR requires that discrepancies between the emission reductions/removal enhancements claimed by the Project Proponent and estimated by the VVB be below this threshold. Individual or aggregation of errors or omissions greater than the ACR materiality threshold of  $\pm 5\%$  requires re-stating before verification statements will be accepted. Individual and aggregation of errors or omissions greater than  $\pm 1\%$ , but less than  $\pm 5\%$ , must be qualified in the verification statement.

## **PAVER Requirements**

Widely accepted criteria for the legitimacy of a carbon offset project.

- **Permanent** - the reduction must last in perpetuity
- **Additional** - the reduction would not have occurred in a business-as-usual scenario
- **Verifiable** - the reduction must be able to be verified with data
- **Enforceable** - the reduction must be counted only once and then it must be retired
- **Real** - the reduction must not be a result of false accounting methodology

## **Project Operator**

An individual or entity that undertakes, develops, and/or owns a project. This may include the project investor, designer, and/or owner of the lands/facilities on which project activities are conducted. The Project Proponent and landowner/facility owner may be different entities.

## **Validation Report**

A formal written report from an approved VVB, providing assurance that a GHG Project Plan conforms with all applicable requirements of the *ACR Standard*, a relevant sector standard, or an applicable ACR-approved methodology.

**Validation/Verification Body (VVB)**

An independent person, persons or firm responsible for performing the validation and/or verification process. To conduct validation and verification the VVB must be ACR approved and accredited by the American National Standards Institute (ANSI) (An alternative to being ANSI approved: the party may be a Designated Operational Entity approved under Clean Development Mechanism or an Accredited Independent Entity approved under Joint Implementation.)

**Verification Statement**

A formal written declaration from an approved VVB providing assurance that a GHG assertion is in conformity with the validated GHG Project Plan/applicable requirements of the *ACR Standard*/any applicable sector standard and the chosen methodology. The verification statement includes the number of ERTs verified for the reporting period and the VVB's determination if the GHG assertion is materially correct.