

Project: CB264 NutriTrade

# *DELIVERABLE 2.6*

## *VERIFICATION GUIDELINES*

Due date of deliverable: M8

Responsible organisation for this deliverable: John Nurminen Foundation



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# 1. Introduction

## Purpose of the report

These verification guidelines set out the methodology and requirements for projects participating in the NutriTrade platform. The guidelines have been established based on identified best practices in water quality and GHG trading schemes. They provide participating organisations and individuals with an outline of the project lifecycle and the various tasks related to the selection and implementation of projects in NutriTrade platform. The main identified tasks are:

- Task 1 – Project documentation
- Task 2 – Project validation
- Task 3 – Project monitoring and verification

Based on these guidelines, **project owners** will be able to:

- Carry out an initial screening of project ideas to select projects suitable for the NutriTrade platform
- Further develop their project concept and submit it for NutriTrade review
- Seek for voluntary financing for approved projects
- Deliver nutrient emissions reductions in projects that have guaranteed sufficient financing

**Sponsoring organisations/individuals** will be able to:

- Assess the credibility of nutrient emission reduction projects
- Gauge the credibility of the platform
- Assess the fit of NutriTrade requirements with their own decision making criteria

## Application, review and amendment of verification guidelines

These guidelines apply to all projects that participate in the NutriTrade platform.

Depending on project size and other characteristics, there may be a requirement for certain projects to have a specific project appraisal including full economic cost/benefit and risk analysis. Alternatively, there may be projects where certain sections of these guidelines may not be required in the interests of cost efficiency and effectiveness.

Characteristics of such projects will evolve and be defined as projects materialize and the guidelines go through a subsequent review process.

## Definitions

These verification guidelines use the following definitions<sup>1</sup> (Table 1):

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<sup>1</sup> Adopted from [https://cdm.unfccc.int/Reference/Guidclarif/glos\\_CDM.pdf](https://cdm.unfccc.int/Reference/Guidclarif/glos_CDM.pdf)

Table 1. List of definitions

<i>Baseline methodology</i>	<i>A methodology applied to establish a baseline scenario for a project activity.</i>
<i>Baseline scenario</i>	<i>The scenario for a project activity that reasonably represents the emissions/removals of nutrients that would occur in the absence of the proposed project activity.</i>
<i>Certification</i>	<i>The written assurance that, during a specified time period, a project activity achieved the reductions in nutrient emissions/increases in nutrient removals, as verified.</i>
<i>CER (certified emission reduction)</i>	<i>A unit issued for nutrient emission reductions/nutrient removals from project activities in accordance with any set requirements, which is equal to one metric tonne of phosphorus equivalent, calculated using the Redfield ratio.</i>
<i>Crediting period</i>	<i>The period in which verified and certified nutrient emission reductions/removals attributable to a project activity can result in the issuance of CERs from that project activity.</i>
<i>DOE (designated operational entity)</i>	<i>An entity qualified to validate proposed project activities, as well as verify and certify reductions in emissions of nutrients and net nutrient removals.</i>
<i>Leakage</i>	<i>The increase in nutrient emissions which occurs outside the boundary of a project activity, and which is measurable and attributable to the project activity. Leakage emissions must be deducted from the emission reductions generated by the project activity.</i>
<i>Monitoring</i>	<i>For a project activity, collecting and archiving all relevant data necessary for determining the baseline, measuring emissions/removals of nutrients within the project boundary, and leakage, as applicable.</i>
<i>Monitoring methodology</i>	<i>The methodology used for monitoring a project activity, which constitutes one part of a baseline and monitoring methodology.</i>
<i>Monitoring plan</i>	<i>The plan which sets out the methodology to be used by project participants for the monitoring of, and by DOEs for verification of the amount of reductions of emissions or removals of nutrients achieved by the project activity.</i>
<i>Monitoring report</i>	<i>A report prepared by a project participant which sets out the nutrient emission reductions or net nutrient removals of an implemented project activity for a particular monitoring period.</i>
<i>PDD (project design document)</i>	<i>The document prepared by a project participant which sets out in detail, in accordance with any set requirements, the project activity which is to be undertaken. The form of PDD, and guidelines on preparing the PDD, will be publicly available on the NutriTrade website.</i>
<i>Project boundary</i>	<i>For a project activity, the significant nutrient emissions/ nutrient removals under the control of the project participant that are reasonably attributable to the project activity, as determined in accordance with any rules and requirements.</i>
<i>Validation</i>	<i>Validation is an independent ex ante assessment of a project activity. Within validation it is assessed whether the project design fulfils any set requirements and is able to generate nutrient reductions / removals. Validation involves the analysis of the project design document (PDD). Successful validation is a prerequisite for the participation of the project in the NutriTrade platform.</i>
<i>Verification</i>	<i>Verification is a periodic independent review to determine the actual nutrient reductions / removals of the project activity. Compliance with any additional criteria defined under the monitoring plan are also verified.</i>

## 2. Guidelines

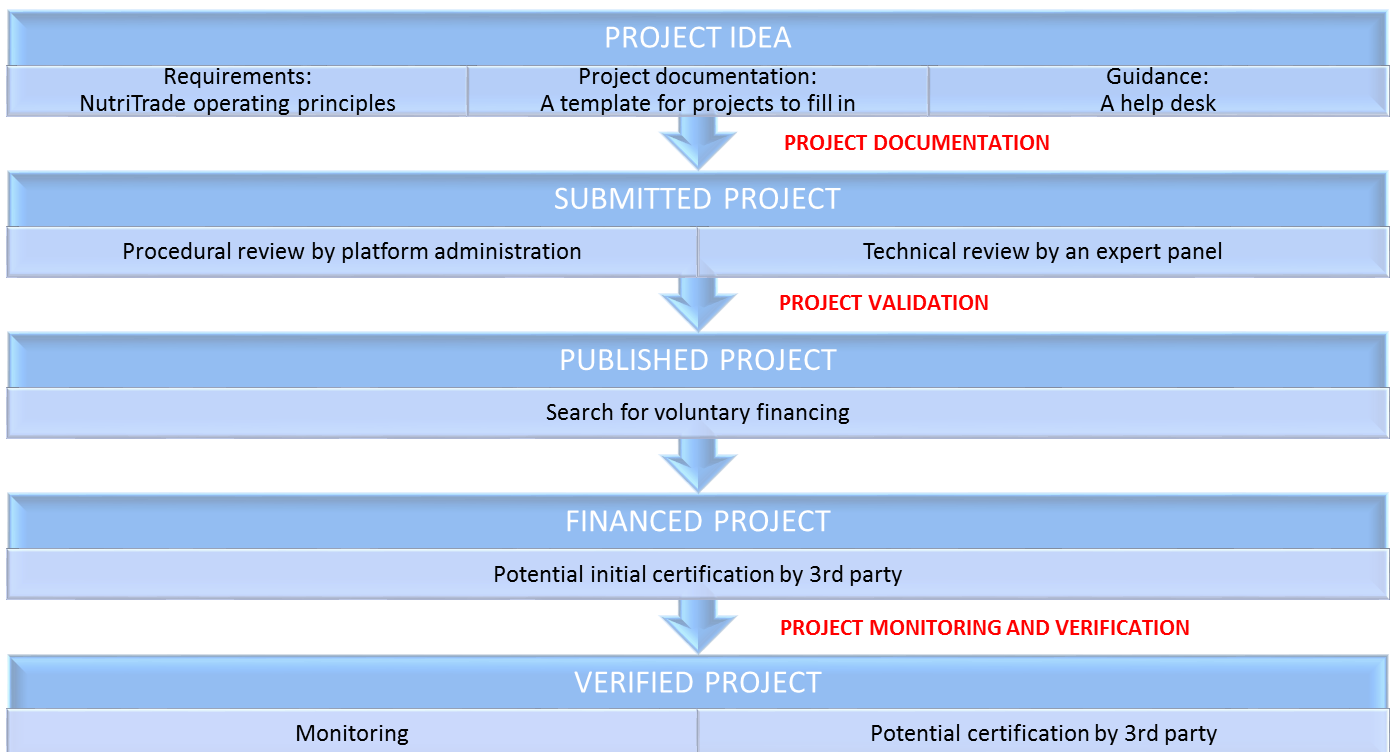
### Project life cycle

On the NutriTrade platform, project life cycle is comprised of five phases: projects develop from an idea to a submitted, published, financed and finally, to a verified project (Figure 1). Each phase may have its own set of tasks and requirements.

Changing of the project status will depend on three main tasks:

1. **Project documentation** refers to changing project status from idea to submitted by providing necessary information for procedural and expert review.
2. **Project validation** refers to changing project status from submitted to published and presumes a successful expert review.
3. **Project monitoring and verification** refers to changing project status from financed to verified. It involves quantification of effects with the help of monitoring reports.

Figure 1. Project life cycle for NutriTrade



## Project documentation

In project documentation, a candidate project provides basic information on the project and suggests an applicable baseline and monitoring methodology, following any relevant NutriTrade requirements, guidelines and templates. The project owner needs to show that the project reduces nutrient discharges / increases nutrient removals and that there is an adequate method for monitoring the impact in place and time. Development projects with no nutrient reduction/removal effects cannot be suggested.

The eligible nutrient is phosphorus and the unit of reporting is kg P<sub>tot</sub>. Later on, it may be feasible to include nitrogen, too.

In order to encourage participation, there will not be a pre-defined list of eligible sectors, activities or geographical areas. Instead, the eligibility of projects is to be assessed on a case-by-case basis, allowing for keeping up with innovation. The downside is that this naturally increases uncertainty and prolongs the negotiation time.

For the purposes of project documentation, a template for a Project Design Document (PDD) has been developed (Table 2). The required information includes a description of project activities, project management, financing, baseline and monitoring methodology, as well as sustainability considerations. Based on the PDD, the platform administration can check the existence of the project owner and the completeness of the information, and an expert panel can assess the feasibility of a project for the NutriTrade platform in a desk review.

Table 2. Contents of the Project Design Document (PDD) for NutriTrade

Category	Required information	Explanation
Basic information	Title of the project activity	Max 100 characters with spaces
	Project owner	Responsible organisation for the application
	Project partners	Project participants involved in the project activity
	Stakeholders	Main stakeholders to be consulted during the project
	Geographical location	Coordinates for project location (from Google Maps)
	Project aims	Purpose of project activity
Project quality	Description of the project	Activities, technologies and/or measures to be implemented, management procedures
	Technological maturity	Pilot activity or demonstrated technology
	Financials	Breakdown of project costs Public/private funding of project activity Total duration of project
	Estimated nutrient emission reduction /removal	Explanation of baseline scenario Methodology for estimating nutrient reductions/removals Volume, timing and duration of nutrient reductions/removals
	Monitoring plan	Parameters and data sources for monitoring of project activities and calculation of nutrient reductions/removals Measurement methods and procedures Monitoring frequency
	Strengths/opportunities of the project	e.g. additional project benefits

	Weaknesses/risks of the project	e.g. environmental impacts, leakage
Contact details		

The documentation process requires that the project owner has:

- submitted a PDD through the NutriTrade platform, and
- committed to NutriTrade 'General Terms and Conditions'

A sample PDDs for the gypsum treatment of agricultural fields is attached to this report.

**Main difference between CDM and NutriTrade:**

In CDM, the documentation process often consists of two steps, Project Idea Note (PIN) and Project Design Document (PDD) even though the former is not mandatory. In addition, the validation process strongly favours the use of previously approved monitoring and baseline methodologies and standardised baselines in estimating the effectiveness of projects.

In NutriTrade, PIN and PDD are merged into one form and there are no limitations regarding which sectors or activities can be included. Project effectiveness may sometimes be directly measurable, as it is in case of nutrient removals in the form of mussels or cyprinid fish. There, the catch and the phosphorus content of the catch determine the volume of P removed.

**Project validation**

In project validation, an expert panel reviews the project.

In the validation of GHG/water projects, reviewers' comments are often divided according to their seriousness. A simple three-level approach is applied in NutriTrade (Table 3).

The outcome of the review is a Review Report that shall be checked by the platform administrator. This can be either:

- a successful review report
  - o without any requests for modification or
  - o with modification requests demanding corrective action to be taken by the project owner
- an unsuccessful review report with at least one non-compliance.

Table 3. Categories of review comments for NutriTrade

Type of comment	Explanation
Modification request	The reviewer requests appropriate action be taken to show compliance with a platform requirement. In order to achieve project validation, all modification requests shall be closed. Modification requests can be converted to observations (see definition below).
Observation	With an observation, the reviewer provides an observation on possible future non-compliance with a platform requirement. Unlike modification requests, observations are warnings and do not need to be corrected. They can be given special attention during e.g. monitoring and verification.
Non-compliance	A non-compliance means that the project does not fulfill a platform requirement. Modification requests are converted to NCs when they are not corrected or inadequately addressed by the project owner.

With a successful review report and any needed corrective action taken, project validation is done by the platform administration and (with the permission of the project owner) the project will obtain 'published' status in the NutriTrade platform. This means that:

- the project information is made publicly available, and
- the project owner can promote the project to sponsors.

If the review is unsuccessful, the validation process ends with the rejection of the project.

Main difference between CDM and NutriTrade:

In CDM, the validation process is outsourced to private entities (known as designated operational entities (DOEs). In NutriTrade, the process of evaluation of a project activity against the requirements of the NutriTrade rules and requirements is to be carried out by an expert panel.

### Project monitoring and verification

Verification is the process of confirming that activities have been implemented properly and that nutrient reductions / removals have been quantified accurately. In order to do this, a project's nutrient reductions / removals are monitored and the monitoring data for a verification period is reviewed and assessed.

Project monitoring plan details the specific parameters to be monitored, monitoring methods and frequency, and the actual physical form and timing of reporting. Monitoring reports can include e.g. a comparison of project site conditions to performance targets set for the measures, a comparative set of photo points from the project site, any significant changes or shortcomings of the project, and actions planned to address any material problems. Monitoring reports or parts of them can be made publicly available at the platform, however respecting privacy issues.

Based on the monitoring plan, the expert panel may suggest an appropriate verification methodology, e.g. to inspect the project or a sample of projects at particular intervals.



Ultimately, the aim is to balance the need to ensure that projects are creating real benefits with the associated costs of inspecting potentially numerous and widely distributed project sites.

In NutriTrade, monitoring is to be taken care of by the project and verification may be conducted by the expert panel that conducted project validation, platform admin or a qualified 3<sup>rd</sup> party. It may be possible to qualify projects to self-verify, too.

The party performing verification should develop a verification plan describing the methods of verification, qualification requirements for verifiers, and the verifier's protections against conflicts of interest. The verification plan should also clarify whether and when on-site inspection should occur.

A verification report summarises the findings: whether the project activity has been correctly implemented, monitoring systems have been complied with and the data is verifiable.

Once verification is complete, certification is a final administrative review and a written affirmation that the credits are valid and that all necessary documentation is in place. At the outset, the NutriTrade platform will not require project certification. Over time, e.g. approved third parties (service providers) may start certifying individual projects.

NutriTrade legal documentation will outline how to deal with differences of opinion during project monitoring and verification.

Main difference between CDM and NutriTrade:

In CDM, verification and certification lead to the creation of tradable goods, certified emission reductions. In NutriTrade, the platform focuses on the process of validating, promoting and financing projects, leaving out the creation, registration and sales of credits.

## Annex 1

### Project documentation for the gypsum treatment of agricultural fields

Title of the project activity	Gypsum treatment of agricultural fields
Project owner	TBD
Project partners	TBD
Stakeholders	Yara Siilinjärvi, agricultural stores (subcontractors: transporter companies), farmers, contractors
Geographical location	TBD (River basins in the Archipelago Sea and the Gulf of Finland)
Project aims	To reduce erosion and phosphorus runoff from agriculture
Description of the project	Gypsum is spread to agricultural fields (4t/ha) by farmers. The farmers order the gypsum from an agricultural store and spread it to the fields. Gypsum improves the ionic strength and structure of the soil, reducing erosion and dissolved phosphorus runoff.
Technological maturity	In 2016, the project can be described as a large scale pilot
Financials	Total costs 230 € / hectare/ once in 5 years -> 46 €/ha/y. The cost is composed of gypsum, its transportation from factory to farm, and work time and other resources of the farmers/contractors spreading the gypsum. All cost items are related to implementation as no maintenance costs occur. There is no other public/private funding for the project activity.
Estimated nutrient emission reduction /removal	Phosphorus load reduction 50 %/ha.
Monitoring plan	TBD
Strengths / opportunities of the project	Most effective and relatively cheap measure in agriculture. Measure easily implemented by farmer, availability of gypsum is good. Supports circular economy and increases the recreational value of rivers and coastal waters.
Weaknesses / risks of the project	Logistical challenges, risks related to wet weather conditions (storage and spreading).

TBD = to be decided

## Literature

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