LIFESUPEREU

Scaling Up Peatland Restoration in Europe

**** Deliverable D5.4

Peatland Carbon Credit Schemes

A EUROPEAN BENCHMARK ANALYSIS

Imprint

EU Initiative	EU LIFE
Project	LIFE SUPER EU – 'Scaling Up Peatland Restoration in Europe'
Leading Partner	NABU (Naturschutzbund Deutschland) e.V.
Author	Janice Neumann
Reviewer	Dr. Tilmann Disselhoff, Dr. Malte Schneider, Anu Uebachs
Editing	Caitlin Hardee
Layout	Beáta Welk Vargová
Date of Publication	05.11.2026

Citation

Neumann, J (2026). Peatland Carbon Credit Schemes: A European Benchmark Analysis. Project Deliverable, EU-LIFE Project 'Scaling Up Peatland Restoration in the EU' (LIFE Super EU). NABU (The Nature And Biodiversity Conservation Union) e.V..

Image credits

Title page, P. 8: © Raul Ling/pexels.com; P. 5, 9: © NABU/Julia Kroos; P. 12: © Michel Decleer; P. 20: © Kaspars Teilans; P. 23: © Grzegorz Górecki; P. 25: © NABU/Jan Piecha

Co-funded by the European Union

Co-funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor the granting authority can be held responsible for them.

Contents

List of abbreviations 3

Introduction 4

The financing gap 4

Aim of this report 5

Scope and limitations 5

Key concepts 6

The Voluntary Carbon Market (VCM) 6

- Carbon Removals and Carbon Farming (CRCF) 7
- The demand side of CRCF 7
- Science Based Target Initiative (SBTi) and claims 7

Peatland carbon-crediting programmes and methodologies 8

International carbon-crediting programmes and methodologies 9

- Verra – Verified Carbon Standard (VCS) and VM0036 9
- The methodology: VM0036 – Rewetting drained temperate peatlands 10
- SOCIALCARBON (SC) Standard and SCM0010 Module M1 10
- The methodology: SCM0010 Module M1 – Rewetting drained peatlands on temperate agricultural land 11

National / regional programmes and methodologies 12

- UK Peatland Code (PC) 12
- Stichting Nationale Koolstofmarkt (SNK) – Valuta voor Veen (VvV) 14
- The methodology: Valuta voor Veen 14
- MoorFutures® 16
- Low Carbon Label (Label Bas-Carbone) – Restauration hydraulique des tourbières dégradées 17
- The methodology: Restauration hydraulique des tourbières dégradées 18

Programmes and frameworks under development 19

- Peatland Standard for Ireland 19
- MoorFuturesFlex 20

Comparison of programmes and methodologies 21

- Governance and maturity 21
- Eligibility and land criteria 22
- Additionality 23
- Quantification methodology 24
- Risk buffer, uncertainty, and permanence 25
- Registry and crediting model 26
- Implications for LIFE projects 26
- Geographic gaps 27

Super credits: Certifying multiple ecosystem services from peatland restoration projects 27

List of abbreviations

AFOLU	Agriculture, Forestry and Other Land Uses
CH_4	Methane
CO_2	Carbon Dioxide
CO_2eq	Carbon Dioxide Equivalent
CORSIA	Carbon Offsetting and Reduction Scheme for International Aviation
CRCF	Carbon Removals and Carbon Farming Regulation
DOC	Dissolved Organic Carbon
EIB	European Investment Bank
EU	European Union
FLAG	Forestry, Land and Agriculture
FPIC	Free, Prior, and Informed Consent
GEST	Greenhouse Gas Emission Site Type
GHG	Greenhouse Gas
ICVCM	Integrity Council for the Voluntary Carbon Market
IPCC	Intergovernmental Panel on Climate Change
LBC	Label Bas-Carbone
N_2O	Nitrous Oxide
OER	Ongoing Emissions Responsibility
PCU	Peatland Carbon Unit
PES	Payments for Ecosystem Services
PIU	Pending Issuance Unit
PDD	Project Design Document
PDT	Peat Depletion Timeco2
SBTi	Science-based target initiative
SC	Social Carbon
SCU	Social Carbon Unit
SDGs	Sustainable Development Goals
SEEA EA	System of Environmental-Economic-Accounting -- Ecosystem Accounting
SER	Society for Ecological Restoration
SNK	Stichting Nationale Koolstofmarkt
TNFD	Taskforce on Nature-related Financial Disclosures
UK PC	UK Peatland Code
VCM	Voluntary Carbon Market
VCS	Verified Carbon Standard
VCU	Verified Carbon Unit
VVB	Validation and Verification Body
VvV	Valuta voor Veen (Currency for Peat – Dutch Standard)

Introduction

Peatlands cover only about 3% of the global land surface, but store one third of the world's soil carbon and more carbon than all of Earth's forest biomass combined.[1] That makes peatlands real climate warriors when left intact: they are not only long-term carbon stores but also active carbon sinks that still take up an estimated 0.36 Gt CO_2eq from the atmosphere each year.[2] However, peatlands have been drained extensively over the past centuries, turning them into massive sources of GHG emissions due to peat oxidation. Europe has experienced the largest proportional degradation of peatlands worldwide. About 50% of all peatlands in the EU are degraded, emitting 220 Mt CO_2eq each year.[3] A recent continental-scale analysis estimates that about 93% of the area of European peat soils no longer has wetland ecosystem cover capable of supporting peat-forming vegetation.[4]

Drained peatlands occupy a small share of EU agricultural land but account for a disproportionately large share of agricultural GHG emissions. Forestry and peat extraction on drained sites add further to GHG emissions from European peatlands. Because drained peat emits CO_2 so intensively, rewetting delivers one of the highest mitigation returns of any ecosystem restoration measure.[5] This makes peatland rewetting a strategic mitigation priority. The European Commission has emphasised that peatland restoration is central to achieving climate neutrality and reaching biodiversity objectives under the European Green Deal.

Meeting European climate targets will require rewetting a significant share of drained peatlands. While specific national targets vary, current restoration rates remain far below what would be needed to align the land-use sector with net-zero pathways. The gap between required and actual restoration scale underlines the urgency of accelerated implementation.

Beyond contributing to reaching European climate change targets, peatland restoration generates multiple ecosystem services, including water regulation and flood and fire mitigation, nutrient retention, enhanced water quality, and biodiversity / wildlife conservation.[6] The multifunctionality of peatlands strengthens the argument for large-scale restoration as a cost-effective public policy. However, while societal benefits are broad and clear, costs and opportunity losses of peatland rewetting are often borne locally, particularly by landowners and farmers working on drained peat soils. Local opposition against rewetting is thus partially due to insufficient policy support and financial compensation for those affected by it.

The financing gap

Peatland restoration typically entails costs for planning, permit procedures, hydrological infrastructure measures (e.g., ditch blocking, water-level control), land-use transition, and monitoring. As compared to drained sites, agriculture or forestry on rewetted peatlands is less lucrative, so restoration leads to forgone income and a reduction in land value. Public funding streams in the EU member states covering these costs include payments for agri-environmental measures under the Common Agricultural Policy (CAP), Just Transition Fund or project grants (e.g., EU LIFE programme) and national restoration programmes. In the UK, public funding for peatland restoration is provided through schemes such as England's Nature for Climate Fund and Environmental Land Management programmes. Those public finance streams are insufficient relative to the scale of rewetting required to meet climate and biodiversity targets.

The EU Nature Restoration Regulation (Regulation (EU) 2024/1991) is the first binding EU framework for peatland rewetting. It requires member states to implement restoration measures on organic soils in agricultural use: at least 30% by 2030, 40% by 2040 and 50% by 2050.[7] The obligation sits with member states. For landowners and farmers, peatlands rewetting remains voluntary, hence member states must provide attractive incentives to reach the target. National restoration plans must set out the financing needs and intended public and private funding; final plans are due in 2027. The regulation creates no dedicated fund and delivery of the peatland targets depends on closing a substantial financing gap.

Peatland rewetting requires high upfront investment, causes ongoing opportunity costs and offers few long-term revenue sources.[8] Farm-level studies show that decisions to raise the water table depend on economic carbon incentives.[9] Without additional revenue streams,

1 United Nations Environment Programme, Global Peatlands Assessment: The State of the World's Peatlands – Evidence for Action toward the Conservation, Restoration, and Sustainable Management of Peatlands (UNEP, 2022).
2 Jens Leifeld, Chloé Wüst-Galley, and Susan Page, "Intact and Managed Peatland Soils as a Source and Sink of GHGs from 1850 to 2100," Nature Climate Change 9 (2019): 945–47.
3 Nina Martin and John Couwenberg, Organic Soils in National Inventory Submissions of EU Countries, Proceedings of the Greifswald Mire Centre 05/2021 (Greifswald Mire Centre, 2021).
4 Enahu Tahitu, Juul Limpens, and Milena Holmgren, "Shifting Climate Boundaries for European Peatlands," Environmental Research Letters 20, no. 12 (2025): 124033.
5 Maria Strack et al., "The Potential of Peatlands as Nature-Based Climate Solutions," Current Climate Change Reports 8, no. 3 (2022): 71–82.
6 Klaus Glenk and Julia Martin-Ortega, "The Economics of Peatland Restoration," Journal of Environmental Economics and Policy 7, no. 4 (2018): 345–62.
7 Regulation (EU) 2024/1991 on nature restoration, OJ L 2024/1991.
8 Matt Robinson and Gokul Ganesh, Financing European Peatlands: A Roadmap towards an Institutional Asset Class, discussion paper (Landscape Finance Lab, 2026).
9 See, for example, Janne Rämö et al., "Carbon Incentives and Farm Economics: A Study of Peatland Drainage Optimization," Agricultural Water Management 314 (2025): 109512.

rewetting is often not financially viable for farmers and landowners under current market conditions. Only when revenues from rewetted peat soils offer the long-term security to equal or exceed drainage-based revenues will landowners and farmers make the shift voluntarily.

The scale challenge is considerable. Achieving European climate neutrality by 2050 implies rewetting nearly all areas of drained peat soils within the next two decades, which would require a manifold increase of current annual restoration rates. Closing this gap requires policies incentivising the rewetting of drained peat soils, but also the mobilisation of capital beyond public budgets. The Landscape Finance Lab estimates a minimum capital requirement of over €2 billion for restoring about 1.1 Mha of peatlands in the next decade. This reflects a finance-constrained share of roughly 10% of technically restorable area, at median capital expenditure of around €1,900/ha, and mainly covers restoration works for the key peatland types, generally excluding land purchase and ongoing compensation or management. As this covers only a fraction of the area that would need rewetting, the full cost is considerably higher. However, even this minimum exceeds what public grants and philanthropy are currently willing or able to provide. Private capital will therefore be needed alongside public funding.

Aim of this report

The LIFE project "Scaling Up Peatland Restoration in Europe" (LIFE SUPER EU) aims to build capacity for large-scale peatland restoration projects across Europe by building a pipeline of "shovel-ready" projects in at least 15 European countries and connecting them to various funding sources, including private finance. Currently, the carbon market is the primary existing monetisation pathway for peatland restoration, but it is itself a young instrument: the voluntary carbon market developed standardised, verified crediting only from the mid-2000s onward. Peatland-specific schemes followed later, from 2011 with MoorFutures in Germany. Despite the growing number of peatland carbon standards, there is limited guidance for project developers and financial actors on how schemes compare and which are available in different European contexts. This report therefore serves as a practical resource for peatland restoration practitioners, project developers, landowners and investors by benchmarking the carbon credit schemes available to European peatland restoration project developers.

The report further identifies the geographic gaps where carbon standards are not developed yet, thereby highlighting development potential. Finally, the report explores "Super Credits", a potential financing instrument that extends beyond carbon to recognise multiple ecosystem services, with the potential to create additional revenue streams for peatland restoration and support the scaling of restoration activities.

Scope and limitations

The report benchmarks carbon crediting programmes and methodologies that a peatland restoration project in Europe can use today or in the near term. It covers six operational instruments (VCS/VM0036, SOCIAL-CARBON/SCM0010-M1, UK Peatland Code, Valuta voor Veen, MoorFutures, Label Bas-Carbone) and two in pilot (MoorFuturesFlex, Peatland Standard for Ireland). It treats the CRCF as the emerging EU framework against which these instruments may seek recognition. The comparison covers governance, eligibility, additionality, quantification, leakage, permanence, crediting and co-benefits.

The report does not cover the wider voluntary market for nature-based solutions. Large international programmes, such as Gold Standard, Plan Vivo, were not assessed, as no methodology for European peatlands is currently active. Smaller private or regional peatland standards are excluded.

The analysis relies on published programme documents and was not tested against project data or interviews. Methodologies are described, but the benchmarking report makes no judgement on which methodologies are more accurate in terms of emissions reduction estimation. Market data are thin and unit counts are snapshots from this report's time of publication, but continue to change regularly.



Key concepts

What is a carbon credit from peatland restoration?

A peatland carbon credit is a uniquely identified unit issued under a carbon-crediting programme after a project's greenhouse gas emission reduction or removal has been quantified and independently verified in accordance with an approved methodology. One carbon credit represents one tonne of CO_2 equivalent. Once issued in a registry, the credit can be transferred and ultimately retired against a permitted claim. All peatland methodologies benchmarked here credit emission reductions only; none issue removal units.

Carbon credit standard

In this report, a carbon-crediting standard is the set of normative requirements against which mitigation activities and resulting credits are assessed. It establishes programme-level quality requirements, including governance, additionality, permanence or reversal-risk management, monitoring, reporting and verification, safeguards, independent validation and verification, and registry procedures. A standard may be one component of a wider carbon-crediting programme rather than the complete operational system.

Carbon credit programme

In this report, a carbon-crediting programme is the governance and administrative system under which mitigation activities are registered and carbon credits are issued. It comprises programme rules, approved methodologies, validation and verification requirements, registry infrastructure, issuance and retirement procedures, and oversight arrangements. The report uses "scheme" only where this is the formal terminology of the relevant framework, such as a CRCF certification scheme.

Carbon credit methodology

A carbon-crediting methodology sets out the activity-specific rules and procedures that a project must follow to quantify greenhouse gas emission reductions and/or removals and become eligible for credit issuance under a carbon-crediting programme. It defines applicability conditions, the project boundary, the baseline scenario, additionality assessment, quantification, leakage, monitoring and uncertainty treatment. Programme-level requirements, such as registry governance and general validation and verification procedures, normally sit outside the methodology.

The Voluntary Carbon Market (VCM)

The VCM is a decentralised, non-governmental market where private actors voluntarily buy and sell carbon credits that represent quantified reductions or removals of GHG emissions. The VCM exists separately from regulated compliance carbon markets. Participation in the VCM is voluntary.

Within Europe, peatland rewetting has become a distinct project category in the VCM. Carbon-crediting programmes use approved methodologies to convert quantified greenhouse gas emission reductions from peat soils into registry units for voluntary buyers. International programmes include Verra's VCS Program, under which projects may apply VM0036, and the SOCIALCARBON Standard, under which projects may apply SCM0010 Module M1. National and regional programmes include the UK Peatland Code, MoorFutures and Valuta voor Veen. Across these programmes, methodologies generally estimate emission reductions using proxies rather than direct flux measurements because continuous direct measurement is costly. A proxy links an observable site condition to an annual emission factor. VM0036, SCM0010 Module M1 and MoorFutures use the GEST (Greenhouse gas Emissions Site Type [10]) approach, which assigns emission factors using vegetation as an indicator. The UK Peatland Code assigns sites to peat-condition categories with emission factors aligned with the UK greenhouse gas inventory,[11] while Valuta voor Veen derives CO_2 emissions from groundwater levels.[12] Carbon remains the only peatland-restoration outcome that is widely quantified in a standardised manner and monetised through credit issuance. Other ecosystem services, including water regulation, cooling and biodiversity, are mainly recognised qualitatively or included as co-benefits in bundled products rather than issued as mature standalone credits. Peatland carbon projects follow the standard VCM logic: they implement additional activities beyond the baseline scenario, independent validation and verification bodies assess compliance and achieved emission reductions, the relevant programme issues units in a registry, and voluntary buyers may purchase and retire those units in accordance with applicable claims guidance.

10 John Couwenberg et al., "Assessing Greenhouse Gas Emissions from Peatlands Using Vegetation as a Proxy," Hydrobiologia 674 (2011): 67–89.
11 IUCN UK Peatland Programme, Peatland Code, version 2.1 (2024).
12 Stichting Nationale Koolstofmarkt, Methodedocument Valuta voor Veen, SNK-Groen-Veenweide-005 (2021).

Carbon Removals and Carbon Farming (CRCF)

In 2024, the European Union adopted Regulation (EU) 2024/3012[13] establishing the voluntary Union certification framework for permanent carbon removals, carbon farming and carbon storage in products, commonly referred to as the Carbon Removals and Carbon Farming Certification Framework (CRCF). Under the CRCF, carbon farming includes activities that increase carbon sequestration and activities that reduce greenhouse gas emissions from soils, including peatland rewetting. The Regulation establishes EU-wide quality criteria and certification rules rather than a conventional voluntary carbon-crediting programme. The CRCF sets the general framework, but the detailed technical requirements for each type of activity, such as peatland rewetting or soil carbon farming, are laid down in certification methodologies. The European Commission adopts these methodologies through delegated acts. Recognised certification schemes then put the rules into practice: they run the certification process, arrange the independent audits and oversee the issuance of certified units.

The Delegate Act that includes the methodology for peatland rewetting projects was formally adopted by the European Commission on July 9, 2026.[14] The act was transmitted to the European Parliament and the Council for an extended scrutiny period until November 2026. If neither institution object, the act can be published in the Official Journal of the EU and enter into force. Publication is therefore expected in late 2026. Following its publication, public and private carbon credit schemes can apply to the European Commission to be recognised as compliant with the CRCF Regulation, the certification methodologies as spelled out in the Delegated Acts, and the minimum implementation requirements.[15] The registration phase is expected to open in early 2027.

The demand side of CRCF

Peatland rewetting units under the CRCF do not expire. The Regulation provides for expiry only of carbon farming sequestration units and carbon storage in products units, not for soil emission reduction units (Reg. 2024/3012, Art. 12(5) [16]). By law, soil emission reduction units count toward the EU's nationally determined contribution and not toward those of third countries or CORSIA (Art. 1(2)). This leads to the question of who buys soil emission reduction units which cannot support an offset claim.

Four groups of potential buyers can be identified. The first are companies with drained peat soils in their own supply chain. Companies that have science-based targets (SBTi) can count rewetting as a reduction in their Scope 3 emissions under separate forest, land and agriculture (FLAG). The second are companies seeking recognition through contribution claims (such as SBTi's Ongoing Emissions Responsibility programme). The third potential buyers are member states, especially to stimulate initial demand and give project developers revenue certainty. The fourth group of potential buyers are water utilities, insurers and municipalities that will profit from carbon farming activities. The CRCF Buyers Club[17] aims to aggregate public and private demand and de-risk investment by securing long-term purchasing agreements under EU standards, ensuring predictable revenues that unlock stable funding for projects.

Science Based Target Initiative (SBTi) and claims

The SBTi sets the most widely used standard for corporate climate targets, with currently more than 11,000 companies that have committed to climate targets.[18] In June 2026, the SBTi published version two of the Corporate Net-Zero Standard.[19] Within the SBTi framework, these rules define which claims corporate buyers can make with carbon units. They therefore play a key role in shaping demand for peatland carbon credits for companies that have set SBTi targets.

The core logic is that companies must cut emissions in their own operations and supply chains. However, carbon credits play a role in two places:

i) the Ongoing Emissions Responsibility (OER), which replaces the former Beyond Value Chain Mitigation (BVCM). OER is entirely voluntary. Companies that finance climate action outside their value chain, in proportion to the emissions that they still release, receive public recognition from the SBTi. Peatland carbon credits are eligible for OER recognition.
ii) Removal requirements from 2035. Large companies (Category A) must finance carbon removals from 2035 that are equal to at least 1% of their ongoing emissions, rising to 100% by their net-zero year. Emissions reduction is not eligible. Only removals count.

13 Regulation (EU) 2024/3012 (CRCF Regulation), OJ L 2024/3012.
14 DG Climate Action, "Commission Adopts Certification Methodologies for Carbon Farming under the CRCF Regulation," European Commission, 10 July 2026.
15 Commission Implementing Regulation (EU) 2025/2358, OJ L 2025/2358.
16 Regulation (EU) 2024/3012 (CRCF Regulation), OJ L 2024/3012.
17 DG Climate Action, "EU CRCF Buyers Club," European Commission, accessed 24 October 2026.
18 Science Based Targets initiative, Corporate Net-Zero Standard V2.0: Foreword and Executive Summary (2026).
19 Science Based Targets initiative, Corporate Net-Zero Standard V2.0 (2026).

The currently available carbon standards and methodologies for peatland rewetting certify emission reductions, but not removals. This is also where the main climate effect of peatland rewetting comes from. Even if rewetted peatlands become carbon sinks again, their sequestration potential is small compared with the emission reduction potential of rewetting. Under the SBTi Corporate Net-Zero Standard, carbon credits for emission reduction are only eligible for the voluntary OER programme. An exception applies to companies with drained peatlands in their own supply chains. Those companies can count rewetting as a reduction under their own land sector targets.

Regarding the development of demand for emission reduction credits, the SBTi Standard is not creating any obligation to buy credits. Purchase instead depends on voluntary leadership. This outcome is a missed opportunity to create demand for peatland carbon credits, channel funding into peatland restoration and thereby significantly reduce a major ongoing source of GHG emissions. A tonne of CO_2 that is not released and a tonne of CO_2 that is removed have the same effect on the amount of CO_2 in the atmosphere. The SBTi's distinction between the two is therefore an accounting choice rather than a physical one.

The choice has a sound basis for the net zero target year, because all sources should already be close to zero, so remaining emissions can only be balanced by removing carbon. However, the case is weak for the transition period, which is meant to build up climate finance on the way to net zero. Excluding the abatement of a large carbon source leaves a mitigation option with a large near-term effect without a structural buyer.



Peatland carbon-crediting programmes and methodologies

For this benchmarking report, carbon-crediting programmes were selected in which an operational or emerging methodology is applicable to peatland restoration in Europe. The report distinguishes between programme-level features, such as governance, validation and verification, registry arrangements, issuance and retirement, and methodology-level requirements, such as eligibility, baselines, additionality, quantification, leakage and monitoring. It also includes selected emerging certification frameworks that do not yet have an operational peatland methodology where their development is directly relevant to an identified geographic or methodological gap. This structure is intended to help peatland project developers identify potentially applicable programmes and methodologies, while informing programme developers and policymakers about gaps in geographic coverage and methodological development.

Each profile follows the same analytical sequence. It first identifies the carbon-crediting programme or certification framework and summarises its governance, unit, registry, validation and verification, crediting, permanence, and safeguard requirements. It then identifies the peatland-specific methodology or methodological rules and examines their scope, status, eligibility conditions, additionality, quantification, leakage, monitoring, and uncertainty treatment. Where an instrument combines programme-level and methodology-level requirements in a single code, standard, or scheme, the profile retains the instrument's official terminology while separating these functions analytically. The profile concludes with an indicative CRCF alignment assessment where relevant.

Eight standards were selected to cover in this report. Only five of these standards are fully operational to date. The two other standards are in piloting or development stage. The way they are catalogued here goes from standards that are internationally applicable to standards that are only applicable nationally or regionally. Fully functional standards are presented first and those in the piloting and development stage follow.

International carbon-crediting programmes and methodologies

Verra – Verified Carbon Standard (VCS) and VM0036

VM0036 is a carbon-crediting methodology for greenhouse gas emission reductions achieved by rewetting drained temperate peatlands. It is approved for use under Verra's Verified Carbon Standard (VCS) Program, which provides the overarching programme rules for project registration, validation and verification, safeguards, non-permanence risk management, registry operation, and VCU issuance. VM0036 provides the peatland-specific applicability conditions and requirements for baselines, additionality, quantification, leakage and monitoring. It is Verra's only active methodology applicable to European peatlands.

The following overview first summarises the VCS programme requirements that apply to all registered projects and then explains the peatland-specific requirements of VM0036. This distinction is important for project developers because operational obligations such as registration, safeguards, validation, verification, registry use and non-permanence risk management are distributed across several VCS programme documents rather than contained in VM0036 alone.

Governance structure

Verra is a US-based non-profit organisation that operates the VCS Program. The VCS is the world's largest voluntary carbon crediting programme, accounting for 63% of voluntary carbon market retirements as of 2024.[20] Carbon credit retirement permanently removes a unit from circulation, ensuring the claim of one mitigated tonne of CO_2 is locked and preventing double counting.

Certified units and registry

Certified units under VCS are called Verified Carbon Units (VCUs). One VCU equals one tonne of CO_2eq. VCUs are tracked in the public Verra Registry but are sold by project developers directly or through market platforms and brokers. Prices are market-based and not set by Verra. The Verra Registry is fully public.

Crediting and verification

VCS operates on a strictly ex-post basis. VCUs are issued only after an approved verification of actual realised emission reductions for a defined monitoring period. Verification covers no more than six consecutive years per single verification event, and a 30-day public stakeholder comment period applies at validation.



The minimum crediting period of a project is 20 years, and the maximum is 100 years, depending on the peat stock.

Permanence and risk

The project proponent must demonstrate sufficient legal security over the project area through land ownership, easements, or long-term land use agreements.

VCS addresses non-permanence risks through an AFOLU Pooled Buffer Account – a shared reserve across all AFOLU projects globally. The percentage withheld is determined project-specific at each verification event by the AFOLU Non-Permanence Risk Tool.[21]

Co-benefits and sustainability criteria

Under the base VCS framework, co-benefit certification is optional. Verra offers two complementary standards that may be applied:

- Climate, Community & Biodiversity Standards (CCBS): Validates biodiversity and community co-benefits.
- SD VISta (Sustainable Development Verified Impact Standard): Covers a broader set of sustainable development indicators aligned with the SDGs.

CCBS or SD VISta certification adds verified co-benefit claims to the VCU, commanding a market price premium, but does not constitute a bundled or stacked ecosystem service credit. The biodiversity and community benefits are verified but not separately quantified or traded as distinct units.

20 Regreener, "Voluntary Carbon Market Update," accessed 13 June 2026.
21 Verra, "Verra Releases Updated AFOLU Non-Permanence Risk Tool," 30 August 2023.

The methodology: VM0036 – Rewetting drained temperate peatlands

Overview and status

VM0036 was published in 2017 and developed by Silvestrum Climate Associates and the University of Greifswald / Greifswald Mire Centre. The VM0036 methodology is part of Verra's AFOLU (Agriculture, Forestry and Other Land Use) category and is applicable to temperate peatlands. A proposed revision extending VM0036 to boreal peatlands was evaluated and placed on hold and reassessment is pending.

As of Q3 2026, one VM0036 project is under development and one is under validation. One further project has been withdrawn and another rejected by Verra.

Eligibility

Eligible project types

VM0036 applies to the rewetting of drained temperate peatlands where prior land use was not or is no longer profitable. Three prior land use types qualify:

- Non-commercial forestry use prior to rewetting
- Peat extraction that was abandoned at least two years before project start
- Agriculture that was abandoned at least two years before project start or continuing in the project scenario without requiring additional peatland drainage elsewhere, or drainage of additional peatland for new agricultural sites is prohibited by law

The post-rewetting land use is limited to forestry, agriculture or nature conservation and recreation. Peat extraction, burning of peat or biomass, and the application of nitrogen fertiliser is prohibited in the project scenario.

Additionality

VM0036 requires a test for regulatory surplus, financial additionality and common practice additionality. The project must go beyond what is legally required, show that the project faces financial or other barriers preventing it from proceeding without carbon revenues, and rewetting must not be a common practice in the project region.

Quantification

The main quantification method for GHG emissions is the GEST methodology. Preference is given to the vegetation composition proxy for GHG fluxes. Water table depth is used as a proxy, where the vegetation composition proxy is not appropriate, and may also be applied to the entire project area. Emission values can also be derived from peer-reviewed literature, including values for land-use or water table depth classes, or from direct flux measurements. Transient methane peaks after rewetting are estimated from conservative literature values. A Project Description with peat depth mapping, GEST baseline mapping, and a formal PDT calculation must be prepared.

Leakage

Under VM0036's applicability conditions, market leakage, activity-shifting leakage, and ecological leakage are all deemed not to occur because pre-project land use was non-profitable or abandoned, and the project must ensure no significant alteration of mean annual water table depths in adjacent areas outside the project boundary, achieved through physical infrastructure (e.g. dams) or a designated buffer zone within the project boundary.

CRCF alignment

An alignment check of VM0036 against the CRCF carbon farming draft methodology shows that VCS and CRCF are substantially compatible. However, some areas may need to be revised:

- CRCF requires co-benefit assessment, whereas co-benefit assessment is voluntary under VM0036
- Crediting period: 20–100 years under VCS; at most 30 years under the CRCF
- CRCF requires all recognised schemes to have registries that integrate with the EU-wide CRCF registry expected by late 2028

The assessment is based on the delegated act adopted on 9 July 2026, which is not yet in force. It should therefore be treated as indicative.

SOCIALCARBON (SC) Standard and SCM0010 Module M1

The SOCIALCARBON Standard is a carbon-crediting programme under which projects are registered, and Social Carbon Units are issued. SCM0010 is an approved carbon-crediting methodology under the programme for greenhouse gas emission reductions from peatland restoration. Its modular architecture consists of an overarching methodology document and activity-specific modules. Module M1 applies to the rewetting of drained peatlands on temperate agricultural land and is currently the only published SOCIALCARBON module applicable to European temperate peatland rewetting.

The following overview first summarises the SOCIALCARBON Standard requirements that apply to registered projects, including governance, unit issuance, registry arrangements, validation and verification, crediting, non-permanence risk management, and mandatory co-benefit monitoring. It then explains the peatland-specific requirements of SCM0010 and Module M1, including scope and status, eligibility, additionality, quantification, leakage, monitoring, and methodology-specific crediting limits.

Governance structure

The Social Carbon Foundation is a UK-based charity and the governing body for the SC Standard. It was first

developed in 2005 by Ecologica Institute in Brazil. Social Carbon operates globally and is voluntary.

Certified units and registry

Certified units are called Social Carbon Units (SCUs). One SCU equals one tonne of CO_2eq. SCUs are tracked in the public SOCIALCARBON Registry,[22] which is operated by Wilder Earth. SCUs are sold directly through project proponents or through a market platform. The credit price is market-based and not set by Social Carbon.

Crediting and verification

Monitoring results and calculations are verified by an accredited validation and verification body approved under the SOCIALCARBON Standard and are documented publicly in the SOCIALCARBON Registry. Projects must submit a monitoring report and undergo verification at least every three years, and validation must be completed within three years of the project start date. The programme provides a 10-year crediting period that may be renewed up to nine times, for a maximum total crediting period of 100 years.

Permanence and risk

All projects must have a minimum expected project longevity of at least 50 years, with continuous monitoring and verification for that duration. Specific legal permanence mechanisms are not prescribed. Project proponents must demonstrate sufficient legal security through land ownership, easements, or long-term agreements.

Non-permanence risk is assessed at each verification using the SOCIALCARBON AFOLU Non-Permanence Risk Tool.[23] Buffer credits are project-specific and held in an account specific to each project. Buffer credits cannot be transferred or retired.

For intentional reversals, the project proponent must reimburse the buffer account with SCUs equal to the reversal size. For unintentional reversals, reimbursement is not required and buffer credits are used instead.

Co-benefits and sustainability criteria

All projects under the SC standard require mandatory co-benefit monitoring. Sustainable livelihood impacts must be monitored using either:

- SC Indicators: A minimum of 18 indicators (three per resource category) tracked across six resource categories: Social, human, financial, biodiversity, natural and carbon.
- Nature Stewardship Framework: Allowing the issuance of separate Nature Stewardship Credits (NSCs) alongside SCUs for ecosystem services other than carbon and biodiversity, or just co-benefit monitoring without credit issuance.

The methodology: SCM0010 Module M1 – Rewetting drained peatlands on temperate agricultural land

Overview and status

SCM0010 has been operational since October 2024. The methodology consists of an overarching methodology document[24] and activity-specific modules.[25] Module M1, which covers the rewetting of drained peatlands on temperate agricultural land, was developed by the Social Carbon Foundation and aeco GmbH. As of Q3 2026, two projects are listed under SCM0010-M1 and the SC registry.

Eligibility

Eligible project types

SCM0010 is an overarching framework for peatland restoration worldwide. Under Module M1, eligible activities are limited to the rewetting of drained peatlands on temperate agricultural land registered as such in the national cadastre system. Post-rewetting land use is limited to:

- Continuation of pre-rewetting and/or gradually shifting towards site-adapted agricultural practices
- Peat-preserving or enhancing agricultural practices, including paludiculture
- Retirement of land, nature conservation and recreation

It is prohibited to extract peat, burn peat or biomass, or apply N-fertiliser other than solid manure.

Additionality

SCM0010 requires a test for regulatory surplus, financial additionality and common practice additionality. The project must go beyond what is legally required, show that the project faces financial or other barriers preventing it from proceeding without carbon revenues, and rewetting must not be a common practice in the project region. The common practice threshold is 15%, meaning that rewetting of drained agricultural peatlands must have an adoption rate below 15% in the relevant region.

Quantification

SCM0010-M1 uses the GEST approach as its primary quantification framework, with GEST emission factors from Couwenberg et al. (2011) as the preferred source. Where these are not sufficient, a stepwise priority approach applies:

1. GEST categories from primary source
2. Regional and site-specific peer-reviewed studies covering multiple sites
3. Credible institutional reports covering multiple sites
4. Single-site or non-peer-reviewed studies and two expert reviews
5. IPCC Wetland Supplement emission factors

22 SOCIALCARBON, "SOCIALCARBON Registry," accessed 23 June 2026.
23 SOCIALCARBON, "Documentation," accessed 23 June 2026.
24 SOCIALCARBON, SCM0010: Methodology for Peatland Restoration, version 1.0 (2024).
25 SOCIALCARBON, SCM0010-M1: Methodology Module for Rewetting Drained Peatlands on Temperate Agricultural Land, version 1.0 (2024).



Leakage

Market leakage, ecological leakage and activity shifting must be demonstrated not to occur.

Crediting

Under SCM0010-M1, the maximum crediting period for each stratum ends in the year when cumulative avoided peat loss under the project scenario equals the peat depth projected to remain after 100 years. Results are calculated in five-year steps and updated whenever the baseline is reassessed. SCUs representing these quantified outcomes are issued strictly ex-post under the SOCIALCARBON Standard, after verification of the realised emission reductions for the relevant monitoring period.

SCM0010 requires the project baseline to be reassessed at each crediting period renewal.

CRCF alignment

An alignment check of SCM0010-M1 against the CRCF carbon farming draft methodology shows that they are substantially compatible. However, some areas may need to be revised:

- Crediting period: up to 100 years under the SOCIALCARBON Standard; at most 30 years under the CRCF
- CRCF requires all recognised schemes to have registries that integrate with the EU-wide CRCF registry expected by late 2028

The assessment is based on the delegated act adopted on 9 July 2026, which is not yet in force. It should therefore be treated as indicative.

National / regional programmes and methodologies

UK Peatland Code (PC)

The UK PC is a voluntary certification standard for peatland restoration projects in the UK. It is one of two UK government-backed carbon standards, alongside the Woodland Carbon Code. The Peatland Code v2.1[26] sets out both programme rules and project-level requirements, supported by the Peatland Code Field Protocol,[27] the Peatland Code Guidance[28] and the Peatland Code Emissions Calculators.[29,30]

Overview and status

The Peatland Code was launched in 2015 and is currently at version 2.1. The PC was developed based on research funded by the Rural Economy and Land Use Programme's Sustainable Uplands project (2005–2011) and a 2012 funded pilot project by the Department for Environment, Food & Rural Affairs. It covers blanket bog, raised bog, and fen peatland types across England, Scotland, Wales, and Northern Ireland. As of July 2026, there are 413 projects listed under the UK PC and 2,606,779 units (pending and verified combined) have been issued, while 971 verified units have been retired.

Governance structure

The PC is owned by the IUCN National Committee UK. Copyright is held by the National Trust for Scotland as nominee for the UK National Committee of the IUCN. It is managed by an Executive Board, supported by a Technical Advisory Board comprising government representatives from all four UK nations, statutory agencies, carbon market experts, and independent researchers.

Certified units and registry

Certified units are called Peatland Carbon Units (PCUs). One PCU equals one tonne CO_2eq. Prior to verification, Pending Issuance Units (PIUs) are issued. PIUs represent predicted future emission reductions, and are tradeable, but cannot be used to report against UK-based emissions until converted to PCUs at verification. Both PIUs and PCUs are tracked in the public UK Land Carbon Registry,[31] managed by S&P Global. Units are sold directly by project developers or landowners, or through specialist brokers. No price is set by the PC. Indicative market prices for PIUs have been in the range of £15–25 per tonne.[32] PCUs can currently only be used by companies

26 IUCN UK Peatland Programme, Peatland Code, version 2.1 (2024).
27 IUCN UK Peatland Programme, Peatland Code Field Protocol, version 1.2 (2022).
28 IUCN UK Peatland Programme, Peatland Code Guidance, version 1.2 (2022).
29 IUCN UK Peatland Programme, Peatland Code Fen Emission Calculator, version 2.1 (2025), spreadsheet.
30 IUCN UK Peatland Programme, Peatland Code Bog Emissions & Carbon Calculator, version 2.3 (2026), spreadsheet.
31 S&P Global, "UK Land Carbon Registry: Peatland Code Projects," accessed 14 September 2026.
32 UK Woodland Carbon Code, "UK Carbon Prices," accessed 23 June 2026.

to offset UK-based emissions and are recognised in the UK Government's Environmental Reporting Guidelines.

Crediting and verification

Two VVBs are approved to validate and verify Peatland Code projects: OF&G, Soil Association.[33]

The PC validates ex-ante emissions reductions but verifies ex-post.

- PIUs are issued at project plan validation or restoration validation and are predicted future emission reductions. PIUs are tradeable. No claims of offsetting or carbon neutrality can be made until PIUs are converted to PCUs at verification. When sold, a legal contract between buyer and seller must specify who carries the risk of non-delivery.
- PCUs are issued at verification and are verified emission reductions. They can be used immediately upon purchase to report against UK-based emissions.

All projects are validated and verified by an approved VVB. VVBs must be accredited under AFOLU Sectoral Scope to ISO/IEC 17029:2019 and ISO 14065:2020. All project documentation is publicly available on the UK Land Carbon Registry. After three consecutive verifications with the same VVB, the fourth verification must be conducted by a different VVB.

Validation of the project plan must be completed within three years of registration. Restoration validation must be completed within one year from project start date.

Verification takes place as a minimum at year five of the project start date and then every 10 years. An additional verification is required at project end if fewer than 10 years have passed since the last verification. Projects must begin the verification process 12 months before the verification is due.

Permanence and risk

The project proponent must commit to managing the land per the management plan for the project duration, restoring the peatland should it suffer from fire, pests, or disease, and informing future landowners of the commitment to the PC and any carbon contract.

PCUs represent reductions that have already occurred and are guaranteed. PIUs that are not converted at verification are cancelled.

All projects must contribute 20% of net GHG emission reductions over the project duration to the PC Risk Buffer, a pooled buffer managed by the IUCN UK. The buffer covers unintentional reversals (e.g. droughts, fires, floods, etc.). For intentional reversals, the project proponent must replace reversed units within 60 calendar days.

Co-benefits and sustainability criteria

The PC does not require a co-benefit reporting or assessment. However, there are mandatory sustainability requirements under the Code:

- The management plan must include a statement of environmental impact (including biodiversity) and a statement of social impact
- Projects must demonstrate contribution to at least three Sustainable Development Goals in the PDD
- Projects must adhere to the No Net Harm principle, ensuring environmental impacts are likely positive
- Mandatory FPIC-based community consultation with continuous feedback mechanisms for the project duration

The development of a methodology for Biodiversity Credits is currently underway.

Eligibility

Eligible project types

Three main peatland habitat types are eligible with associated baseline condition categories:

- Raised bog or blanket bogs that are either actively eroded, drained, modified, or fall under the land use categories of drained cropland, intensive grassland or extensive grassland
- Fens that are modified or fall in the land use categories of drained cropland, intensive grassland or extensive grassland

Project activities must revegetate and/or rewet the peatland and must lead to lower emission factors. The project must further confirm that there has been no new drainage and/or vegetation removal in the project area since November 2015. That means that the UK PC currently does not support paludiculture because a lack of data has been identified by the technical advisory board. Once data gaps are filled and evidence is collected, the inclusion of paludiculture is intended.[34]

Additionality

The PC requires a test for regulatory surplus and financial additionality. That means that no legal requirement to rewet the peatland in the project area exists and no more than 85% of total project restoration and management costs over the project duration can be covered by non-carbon income to prove financial additionality.

Quantification

The PC uses condition categories as proxy for GHG emissions. The emissions factors for the categories are from Evans et al.[35] (updated 2023), are UK-specific and aligned with the UK GHG Inventory. Quantification is conducted using the Peatland Code Emissions Calculator for either

33 IUCN UK Peatland Programme, "Validation and Verification Bodies," accessed 23 June 2026.
34 IUCN UK Peatland Programme, "Paludiculture Call for Evidence for Peatland Code," 11 January 2024.
35 Chris Evans et al., Aligning the Peatland Code with the UK Peatland Inventory, report to Defra and the IUCN UK Peatland Programme (2022, updated 2023).

bogs[36] or fens.[37] These are the only approved quantification tools for the PC.

Leakage

The project must declare any intention to change the use or management of land elsewhere because of restoration. If land management is changed elsewhere, the project must assess whether the resulting GHG emissions will be significant (≥5% of total emissions reduction over the project duration). If significant, those emissions must be quantified and deducted from the projected emission reductions using the Emissions Calculator. If no such intention exists, no leakage assessment is required.

CRCF alignment

Not applicable. The PC is a UK-only standard.

Stichting Nationale Koolstofmarkt (SNK) – Valuta voor Veen (VvV)

VvV is a carbon-crediting methodology for GHG emissions reduction through raising the groundwater levels of Dutch peatlands.[38] It operates under the programme of SNK. VvV enables landowners and project developers to translate verified peat oxidation reductions into tradeable carbon certificates on the voluntary national carbon market.

The following overview first summarises the SNK programme requirements that apply to all registered projects and then explains the peatland-specific requirements of VvV.

Governance structure

SNK, a non-profit foundation, is the governing and issuing body for VvV certificates. SNK was established under the Green Deal Nationale Koolstofmarkt, that brings together government, businesses, NGOs, and institutions to develop a credible national voluntary carbon market. Carbon reduction credits through VvV are not legally mandated instruments, as the scheme is entirely voluntary for both project operators and buyers.

Certified units and registry

All certificates are tracked in a publicly accessible SNK registry[39] and are sold via PlatformCO_2neutraal,[40] a separate entity. SNK validates, registers, and organises the verification of emissions reduction, but is not involved in selling credits. There is no price set by SNK. Generally, available emission reductions credits from peatland areas are currently offered at €100–€115 per credit on Platform-CO_2neutraal.

Crediting and verification

SNK allows both ex-ante and ex-post crediting. For ex-ante crediting, only 85% of credits are issued, while 15% are kept as a buffer and only issued after verification. Ex-post credits are issued after verification.

All monitoring results and calculations are verified by external independent third parties appointed by SNK. After validation of the project plan, credits are generated in the SNK registry with status validated. After periodic verification confirming actual realised emission reductions, the status changes to verified. Only verified credits can be used by buyers to make contribution claims. The SNK registry publicly shows credit status, holder, and quantity.

The frequency of verification by an independent party can be freely chosen, but the first verification should be no later than five years after project start.

Permanence and risk

The 15% buffer withheld under ex-ante crediting accounts for performance uncertainties. Ex-post credits do not account for future risks.

Co-benefits and sustainability criteria

Neither SNK nor VvV requires explicit co-benefits and there is no mandatory co-benefit assessment. Co-benefits, i.e. biodiversity uplift, reduced soil subsidence, enhanced water quality, and landscape/cultural heritage values of preserving peat meadows are acknowledged, but not formally credited.

The methodology: Valuta voor Veen

Overview and status

VvV has been operational since 2020 and was developed in response to large-scale peat oxidation that releases approximately seven million tonnes of CO_2 annually. This makes peatland drainage one of the single largest sources of land-use GHG emissions in the Netherlands. Besides GHG emissions, accelerated peat oxidation due to low groundwater levels leads to soil subsidence[41] – an increasing threat to flood protection, infrastructure integrity, and the economic viability of affected areas in the Netherlands. An updated version of the VvV methodology is expected in 2026. As of April 2024, SNK had a total of 64 projects registered across all methodologies,[42] of which 19 are peatland rewetting projects.

36 IUCN UK Peatland Programme, Peatland Code Bog Emissions & Carbon Calculator, version 2.3 (2026).
37 IUCN UK Peatland Programme, Peatland Code Fen Emission Calculator, version 2.1 (2025).
38 Stichting Nationale Koolstofmarkt, Methodedocument Valuta voor Veen, version 007 (2023).
39 Stichting Nationale Koolstofmarkt, "Register," accessed 19 May 2026.
40 PlatformCO_2neutraal, home page, accessed 19 May 2026.
41 Rudi Hessel et al., "The Relationship between Ditch Water Level and Peat Subsidence: 50 Years of Measurements with Levelling and Subsidence Plates in the Netherlands," Netherlands Journal of Geosciences 104 (2025): e12641.
42 Stichting Nationale Koolstofmarkt, Register projecten, 10 April 2024.

Eligibility

Eligible project types

The VvV peatland methodology can be applied to three land use types.

Variant 1: Retained Agricultural Pasture Function

Water level is raised in peat meadow areas that continue their agricultural function for grass cultivation. This includes extensification of agricultural management and agri-nature management combinations.

Variant 2: Wet Farming (Paludiculture)

Water level is raised to enable cultivation of crops, such as cattail, reed, and cranberries. The land retains an agricultural function.

Variant 3: Nature Development or Conservation

The area's character changes to nature, or existing threatened natural peat areas are preserved, restored, or expanded.

Individual project sites can be bundled into one collective project, i.e., multiple landowners can pool under one project plan and share SNK fees.

Additionality

VvV requires a test for regulatory surplus and common practice additionality. As of version 007 of the methodology (July 2023), there is no legal obligation in the Netherlands to reduce GHG emissions from agricultural peatlands. Furthermore, raising water levels is not common practice in the Netherlands. Therefore, any voluntary water level increase is considered additional, if no definitive decision to conduct the project and raise the water level has been made prior to SNK registration. VvV does not require proof of financial additionality for agricultural land, i.e. profitability without carbon certificates.

Variant 1 (agriculture): In all Dutch agricultural peat meadow areas, low water tables are the norm. Without intervention, the water levels remain low, and peat oxidation continues. Hence, a voluntary water level increase demonstrates additionality automatically. If a subsidy that requires higher water levels is granted, only the additional water level increase beyond the subsidised plan is credible. Variant 2 (wet farming): Follows the same baseline logic as variant 1.

Variant 3 (conservation): Additionality only exists when the measures exceed the required nature management objective. If a nature management subsidy already requires a specific water level, only levels above are credible. All nature restoration done in addition to the National Ecological Network / Natura 2000 obligations qualifies.

Quantification

There is one quantification framework provided in the methodology. For all variants, the annual emissions reduction is calculated as:

CO_2eq reduction/ha in year t = (CO_2eq emission/ha [baseline, t]) − (CO_2eq emission/ha [project, t] + 0.4 t CO_2*eq/ha [fixed leakage deduction*]) − 10% risk adjustment**

* the 0.4 t CO_2eq/ha fixed deduction does not apply to certified organic farmers or non-professional landowner/users that use no fertiliser

** the 10% risk adjustment does not apply to variant 3 (conservation).

Baseline CO_2 emissions are calculated using the Fritz et al. (2017)[43] empirical relationship between mean annual groundwater level and CO_2 emissions from Dutch peat meadows.

CH_4 and N_2O emissions at baseline are read from a table provided (from Jurasinski et al. 2016 [44]) and determined by groundwater level.

Leakage

The methodology addresses leakage within its project boundary framework:

Included:

- Supply of additional animal feed from elsewhere
- More intensive use of other peat meadow plots within the same agricultural operation
- Different management practices (included in the quantification through the 0.4 t CO_2eq)
- Removal of peat soil outside the project area

Excluded:

- Increase in number of livestock nationally (considered neutral due to phosphate rights system)
- Conversion of peat meadow areas with a nature function for intensive agricultural use
- Developments outside the Netherlands

Crediting

Project durations vary by variant. Variant 1 and 2 require a 10-year commitment, renewable after re-evaluation and renewed baseline. Variant 3 (conservation) projects require a 50-year commitment, with a baseline renewal after 10 years.

However, there are certain mechanisms for a more permanent water level raise, securable through contracts, land registry notation, or Water Board decisions for

43 Christian Fritz et al., "Meten is weten bij bodemdalingmitigatie" [Measuring is knowing in soil subsidence mitigation: Effect of water level management and crop choice on CO_2 emissions and peat oxidation], Bodem 27, no. 2 (2017): 20–22.

44 Gerald Jurasinski et al., "Greenhouse Gas Emissions," in Paludiculture – Productive Use of Wet Peatlands: Climate Protection – Biodiversity – Regional Economic Benefits, ed. Wendelin Wichtmann, Christian Schröder, and Hans Joosten (Schweizerbart Science Publishers, 2016), 79–93.

the specific parcel, which may result in legally binding higher water levels. The VvV methodology does not require a permanence mechanism in place beyond the project period.

VvV has a blended model of **ex-ante** and **ex-post** crediting. For **ex-ante** crediting, the landowner has to contractually commit in advance for the project period.

CRCF alignment

The SNK stated in its 2024 annual report that it intends to seek recognition under the CRCF. Recognition would apply to the SNK certification scheme for one or more CRCF certification methodologies, not to VvV as a standalone methodology. The following comparison therefore assesses whether the existing SNK programme arrangements and the Valuta voor Veen methodology appear capable of meeting the relevant CRCF requirements; it does not constitute a formal compliance determination.

- CRCF requires ex-post issuance only, whereas SNK allows partial ex-ante issuance
- CRCF requires a sustainability and biodiversity co-benefit assessment, whereas VvV has no requirement
- CRCF requires validation and verification bodies to hold accreditation under EN ISO/IEC 17065, 17029, and ISO 14065; VvV is currently not aligned with these norms
- CRCF requires all recognised schemes' registers to integrate with the EU-wide CRCF registry expected by end-2028

The assessment is based on the delegated act adopted on 9 July 2026, which is not yet in force. It should therefore be treated as indicative.

MoorFutures®

MoorFutures is a regional carbon credit scheme for GHG emission reductions from rewetted peatlands.

Overview and status

MoorFutures was developed in 2011 by the state of Mecklenburg-Western Pomerania and the University of Greifswald and was the first carbon credit scheme specific to the rewetting of peatlands. It is currently operational in four German states. Until November 2024, more than 30,000 certificates were sold, contributing to peatland rewetting with roughly 1.5 million EUR.[45] The MoorFutures standard is modelled closely on the Verified Carbon Standard (VCS) and follows the Kyoto Protocol, ISO 14064, and ISO 14065.[46]

MoorFutures is also applied outside of Germany. In Belgium, the Zwarte Beek peatland restoration project of EcoTree and the NGO Natuurpunt is certified under the MoorFutures standard.[47] The MoorFutures methodology has also been applied in Ukraine,[48] and there have been reports that it may be adapted in Lithuania.

Governance structure

MoorFutures is trademarked by the state of Mecklenburg-Western Pomerania (Ministry for Climate Protection, Agriculture, Rural Areas and Environment). The trademark license was granted to three other states (Brandenburg, Schleswig-Holstein, and Lower Saxony). Each state manages its own project implementation and certificate sales.

A cross-state project working group coordinates further standard development and a scientific advisory board with scientists from the University of Greifswald, Eberswalde, and Kiel provides scientific review of projects and maintains the scientific integrity of the standard.[49]

Certified units and registry

Certified units are called MoorFutures and are equal to one tonne of CO_2eq avoided. Certificates are sold directly by the state partners and there is no trading registry. Therefore, MoorFutures cannot currently be traded and are retired immediately after sale. The price of certificates is the sum of all project-related costs, divided by the predicted reduction in emissions.

Crediting and verification

MoorFutures uses a structured certificate release mechanism and follows an ex-ante approach:

- After pre-validation and before the rewetting measures are implemented: up to 25% of the projected GHG emission reductions are released for sale (minus buffer), if land is contractually secured, GHG accounting is validated, and permits are granted.
- The remaining certificates are issued after project implementation.

Permanence and risk

MoorFutures characterises avoided emissions as permanent. However, land acquisition or long-term land use agreements, as well as water law planning approvals, provide binding legal status.

MoorFutures applies a risk buffer of 30% on the total projected emission reductions. 50% of the withheld risk buffer is a melting buffer and can be released stepwise. One third of the buffer can be released after a minimum of five years, if projected emissions are confirmed by monitoring. The other two thirds can be released after

45 MoorFutures, "Konzept," accessed 6 May 2026.
46 MoorFutures, "Konzept," accessed 6 May 2026.
47 EcoTree, "Zwarte Beek: EcoTree's First Peatland Restoration Project in Belgium," 1 July 2025.
48 Oleksandr Orlov, "Methodology for Carbon Credit Calculation in the Context of Ukraine and Results of Its Application in Drevlyanskyi Nature Reserve (Zhytomyr Region)," Studia Biologica 20, no. 1 (2026): 191–232.
49 MoorFutures, "Organisation," accessed 7 May 2026.

10 years, if confirmed by monitoring. The remaining 50% risk buffer (=15% total) is a permanent buffer for the entire project duration.

Co-benefits and sustainability criteria

MoorFutures requires a non-deterioration obligation. This means that project implementation must not lead to negative effects on ecosystem services and must not worsen socioeconomic or ecological conditions in the region.

Beyond this, MoorFutures provides options to quantify additional ecosystem services (i.e. water quality improvement, evaporative cooling, and biodiversity).[50] Projects that choose this premium route will be issued certificates that bundle the GHG emission reduction and the quantified ecosystem services. These premium credits can sell at a higher price than standard emission reduction certificates. This approach is still exploratory.

Eligibility

Eligible project types

MoorFutures covers peatland rewetting projects in four states of Germany. Both bogs and fens are included, and post-rewetting land use is not restricted, but can include continued land use, gradual transition or nature conservation, if the water level is raised, and peat oxidation and emissions are reduced. Generally, MoorFutures can be combined with agri-environmental programmes/payments. MoorFutures suggests a project area of at least 5–10 ha for economic viability. The minimum peat depth should be at least 50 cm.

Additionality

MoorFutures requires financial and legal additionality. The project must prove that it would not have been financed and implemented without revenues from certificate sales and goes beyond what is legally required.

Quantification

The primary quantification approach is the GEST approach. As of 2026, all MoorFutures projects apply the GEST approach. Other science-based quantification methods are reviewed and may be approved by the scientific advisory board if the project chooses to use a different method.

Leakage

Land use changes or intensification that occur because of the project activity and are outside the project boundaries must be considered. A transparent and conservative assessment shall be carried out to determine GHG emissions. GHG emissions over the project period shall be deducted from the project's total emission reductions. If additional ecosystem services are quantified, leakage shall be assessed following the same principles.

CRCF alignment

Though MoorFutures states in its FAQs that the methodology has informed the EU CRCF carbon farming methodology and follows a similar quantification approach, MoorFutures is currently not aligned with the latest CRCF draft and would need substantial changes and developments to register as a scheme under the CRCF.

MoorFutures does not fulfil the requirements on different levels:

- Ex-ante crediting: CRCF requires credits to be issued ex post
- Verification body accreditation: CRCF requires certification bodies to be accredited under EN ISO/IEC 17065
- Registry integration: CRCF requires all schemes registries to integrate with the EU-wide registry expected by the end of 2028. MoorFutures currently does not have a centralised registry.

The assessment is based on the delegated act adopted on 9 July 2026, which is not yet in force. It should therefore be treated as indicative.

The MoorFuturesFlex methodology (see methodologies under development) would close the first of these gaps, as it issues certificates ex-post only.

Low Carbon Label (Label Bas-Carbone) – Restauration hydraulique des tourbières dégradées

The Label Bas-Carbone (LBC) is a public, voluntary certification framework for GHG emission reduction and sequestration projects in France. It was created by decree No. 2018-1043 of 28 November 2018. Activity-specific rules are set out in methods approved by the ministry (Ministère de la Transition Écologique et Solidaire). "Restauration hydraulique des tourbières dégradées'[51] is the LBC method for avoided emissions from the hydrological restoration of degraded peatlands.

The following overview first summarises the LBC programme requirements that apply to all labelled projects and then explains the peatland-specific requirements of the method.

Governance structure

The LBC is administered by the French Ministry of Ecological and Inclusive Transition, which is responsible for approving, revising and repealing LBC methodologies. These decisions are informed by reviews from the LBC Scientific Advisory Board and public consultations. Any stakeholder can propose a method. The regional prefect grants and withdraws the label for individual projects and verifies and recognises the generated credits.

Certified units and registry

50 Franziska Tanneberger et al., "Quantifying Ecosystem Services of Rewetted Peatlands – the MoorFutures Methodologies," Ecological Indicators 163 (2024): 112048.

51 Fédération des Conservatoires d'espaces naturels, Méthode Label bas-carbone pour la restauration hydraulique des tourbières dégradées [Label Bas-Carbone method for the hydraulic restoration of

Certified units are called carbon credits. One credit equals one tonne of CO_2eq with verified reduction or sequestration. Credits are tracked in a registry that is accessible only to project applicants, financiers and auditors. Verified credits can be transferred to a third party on a contract base. No price is set by the LBC. Sellers must declare the unit sale price to the Directorate General for Energy and Climate within three months of a sale, but unit prices are not published.

Crediting and verification

The LBC allows ex-ante and ex-post crediting. Only actions started after project notification can generate credits and verification takes place upon request of the project holder, at their cost and based on monitoring reports. The auditor is selected from a list or criteria set in the method and must be independent.

Permanence and risk

The peatland methodology applies a buffer only to ex-ante verification. A 10% buffer covers extreme climate events and fire. A further buffer must be applied in case the long-term land security of the project site is not granted for the entire area. No buffer applies to ex-post verification.

Co-benefits and sustainability criteria

Each LBC project must include information regarding potential impacts and co-benefits that are evaluated by an auditor.

Co-benefit reporting for the peatland methodology must include information on biodiversity, water quality and quantity, socio-economic benefits and additional climate benefits. Avoided emissions beyond the 30-year validity can be reported as a co-benefit but are not credited. Dedicated co-benefit monitoring is not mandatory, except for habitat monitoring for ex-ante verification.

The methodology: Restauration hydraulique des tourbières dégradées

Overview and status

The method was developed by the Fédération des Conservatoires d'espaces naturels (FCEN) in collaboration with the Universities Franche-Compté and Rennes. It was approved by ministerial decision on 16 June 2026. The methodology quantifies avoided GHG emissions. As of September 2026, there is no registered project under this methodology.

Eligibility

Eligible project types

Degraded minerotrophic and ombotrophic peatlands in mainland France with identified restoration potential are eligible under the methodology. Specific measures are not prescribed, but must lead to a water table rise and peat preservation.

Only peatlands that were hydrologically altered at least 20 years before project start are eligible and the peat thickness must exceed the subsidence expected over the 30-year project duration. The project area must be secured over the entire project duration before the project can register under the LBC. Peat extraction sites are only eligible five years after the legally required measures were implemented. Measures that permanently flood peatlands are not eligible.

Additionality

The method requires regulatory and financial additionality. Regulatory additionality is currently automatically met for all eligible projects because there is no legal requirement in France to rewet peatlands. The only exception are former peat extraction sites, as operators have a legal requirement to rehabilitate the sites.

A project is financially additional if total public aid is no more than 50% of total project costs. Project costs include land acquisition, feasibility studies, restoration works, monitoring and management over the 30-year project duration.

Quantification

Peat subsidence is used as a proxy for CO_2 emissions from peat mineralisation. In the baseline, the subsidence rate is calculated by applying an equation[52] that considers peat thickness above the dry season water table, any mineral layers, a temperature factor and a land-use factor. Baseline emissions are the carbon stock above the water table, multiplied by a fixed mineralisation rate of 80%, prorated to the 30-year project validity. Carbon stocks can use a Tier 2 default of 580 t C/ha/m or Tier 3 field measurements. Baseline CH_4 emissions are set to zero and N_2O is excluded for simplification.

Leakage

The methodology contains no explicit provisions for assessing or accounting for leakage.

Crediting

The crediting period is 30 years. Credits can be verified ex-ante or ex-post and audits take place at 5, 10, 20 and 30 years after measures were completed.

- Ex-ante verification: all avoided emissions over 30 years are verified at the five-year audit. The mean annual water table must be 0–20 cm below the surface in every year. Peat-forming vegetation must cover at least 50% of the restored area. A management plan by an approved environmental organisation and

degraded peatlands], approved by ministerial decision NOR TECR2524219S (2025).

52 Aileen Knieß, "Development and Application of a Semi-Quantitative Decision Support System to Predict Long-Term Changes of Peatland Functions" (PhD diss., Christian-Albrechts-Universität zu Kiel, 2008).

strong controls are required.
- Ex-post verification: one third of the credits can be verified at each of the 10-, 20- and 30-year audits, based on measured subsidence. No credits are verified at the five-year audit.

CRCF alignment

The methodology is mostly incompatible with the CRCF and would have to undergo major changes for CRCF recognition. Incompatibilities include:

- Ex-ante verification
- Auditing intervals
- Quantification approach
- Excluding other gases (CH_4, N_2O)
- Additionality
- Fertiliser applications
- Restricted registry access

The assessment is based on the delegated act adopted on 9 July 2026, which is not yet in force. It should therefore be treated as indicative.

Programmes and frameworks under development

Peatland Standard for Ireland

The Peatland Standard of Ireland is a certification scheme for peatland restoration and resilience projects developed by Peatland Finance Ireland (PFI). The Standard certifies improvements under five broad categories: Carbon, water services, biodiversity, community, and wildfire reduction, issued as a single bundled Ecosystem Certificate.[53] The Peatland Standard for Ireland is currently at version 1.0 that was developed following a public consultation in 2024. It is currently in its pilot phase.

Governance structure

PFI is a not-for-profit organisation, aiming to channel funding from public and private sources to accelerate peatland restoration in Ireland. PFI supports and manages projects under the Standard, connects them with investors and funding, ensures compliance, and in some cases may act as project developer itself in partnership with landowners. Governing principles include multiple benefits for people and landscapes, independent and broad governance, a Just Transition framework, transparency and integrity, an equitable structure prioritising communities and small landowners, not-for-profit reinvestment of proceeds, and resilient blended (public/private) finance.

Projects and certificates are tracked on the Peatland Standard of Ireland Ecosystem Registry. During the piloting phase until 2027, the registry is held by PFI. Following the piloting phase, the registry will be transferred to an independent third-party.

Eligibility

Eligible project types

The Standard covers peatland restoration and resilience projects in Ireland, defined broadly to include raised bog, blanket bog, bog woodland, heath, fens, and modified forms such as afforested, grassland-on-peat, cutover, and cutaway bog with at least 50 cm peat depth. Applicants may be project developers, individuals, constituted groups, community groups, or organisations. Focus is on raising the water table rather than restricting land use. There is no minimum project size, and smaller projects may be able to join larger projects for cost efficiency. Peatlands that were intentionally drained or degraded after 1 January 2020 are excluded.

Additionality

The Standard requires both legal and financial additionality tests. The legal additionality test excludes any landscape works or improvements already required by an existing legal obligation. The financial additionality test requires that the project needs voluntary market finance over its full duration. A project that is financially feasible without private finance is not eligible. Maximum permissible public funding is 85% of total project costs and a minimum of 15% must come from private/carbon finance.

Quantification

Quantification follows the UN System of Environmental Economic Accounting – Ecosystem Accounting (SEEA EA) approach, identifying asset extent, asset condition, ecosystem service flows, and beneficiaries. SEEA EA supplies the accounting structure around which the certificate is organised. It does not itself have emission factors or calculation methods. The actual quantification uses results-based (Tier 3) methodologies via a Field Protocol and Emission Reduction and Ecosystem Services Calculators. Emission reductions are quantified using a water table depth model or a vegetation category approach.

Certificates bundle five metric categories: Carbon, water services, biodiversity, community, and wildfire reduction; projects can certify one or several categories.

Leakage

Intensified land use (increased stocking rates, drainage or fertiliser use) outside the project boundary must be assessed in the PDD and subtracted from the gross ecosystem improvements.

53 Peatland Finance Ireland, The Peatland Standard of Ireland, version 1.0 (2025).

Permanence and risk

Project length is capped by a peat-exhaustion calculation: peat depth (cm) divided by deterioration rate (1 cm/year for bogs, 1.5 cm/year for fens) gives maximum project length, with a maximum of 100 years. Landowners, land managers and project developers must sign Commitment Statements.

A risk buffer of 20% is deducted from net emission reductions and held as a pooled insurance mechanism across all projects. An additional transition and works buffer applies for extreme land-use-change projects.

Crediting

The Peatland Standard for Ireland is results-based and ex-post. Certificates are only used once verified, and pending, unverified certificates are not sold.

The first verification is conducted after five years by an independent party and every 10 years thereafter.

Validation/verification bodies are independent third parties accredited, or in the process of accreditation, to ISO 14064-3:2019 and ISO 14065:2020/ISO 17029:2019. A biodiversity-specific ISO standard is under development.

Co-benefits and sustainability criteria

The bundled Ecosystem Certificate reports biodiversity, water services, community, and wildfire-reduction metrics alongside carbon. Sustainable development safeguards are required through consultation, project design, and restoration planning, aligned with the SER International Principles, TNFD principles, and UN SDGs 13 and 15.

CRCF alignment check

The Peatland Standard for Ireland states that it is aligned with the EU CRCF framework for soil emission reductions and will develop to ensure compliance with this future EU meta-registry.

MoorFuturesFlex

MoorFuturesFlex is a methodology under the MoorFutures standard for projects with ex-post verification and issuance of certificates.[54] It allows for stepwise water level rise and continued agricultural land use and has been developed in 2024 by aeco GmbH, the Mecklenburg-Western Pomeranian (MV) climate ministry and its partners. Changes compared to the classic MoorFutures version were made in direct exchange with the EU.

MoorFuturesFlex is in a piloting stage and has so far only been implemented and accepted in MV. The other three MoorFutures states have not adopted it at this stage. The first pilot project started in November 2024 to test the method.

Changes compared to the classic MoorFutures

- Crediting: Classic MoorFutures issue certificates ex-ante (up to 25% before rewetting, the rest after implementation). MoorFuturesFlex instead determines emission reductions annually and issues certificates ex-post during the project term, only after the water level rise has been documented.
- Verification: Instead of monitoring checkpoints after five and 10 years, verification takes place at shorter intervals (e.g. annually), with an on-site verification at least every five years.
- Quantification: Still GEST-based, but the project scenario relies on continuously measured water levels, interpolated across the site and complemented by vegetation surveys at least every five years, rather than mainly on vegetation mapping.
- Risk buffer: 15% of the emission reductions in each verification period instead of 30%. It can be released on a justified application, subject to approval by the scientific advisory board and the ministry's Competence Centre for Eco-Securities (Kompetenzstelle Ökowertpapier).
- Peat depth: No 50 cm minimum. Instead, areas where the peat would be depleted within 100 years in the project scenario are excluded from the calculation.
- Permanence: Long-term legal security (land purchase, agreements, planning approvals) is sought where possible but is not a precondition. Otherwise the wet state is maintained through the income incentive, and only emission reductions already achieved are sold.
- Water levels and land use: Stepwise water level rises with continued agricultural use, instead of long-term fixed high water levels and largely giving up land use. Local landowners decide how far water levels are raised.
- Revenue model: Certificate sales provide landowners with annual income and preserve the land's yield value, instead of a cost-based price per certificate sold ahead of or at implementation.
- Agri-environmental programmes: Combination with Agri-environmental and climate (AECM) depends on the additionality analysis. A project can be additional if AECM participation only becomes possible through MoorFuturesFlex, but MoorFuturesFlex cannot be used where AECMs alone could achieve the rewetting.



54 MoorFutures, MoorFuturesflex: Methodologie für MoorFutures Projekte mit ex post Verifizierung und Ausschüttung von Zertifikaten [MoorFuturesflex: Methodology for MoorFutures projects with ex post verification and issuance of certificates], version 1.0 (October 2024).

Comparison of programmes and methodologies

Governance and maturity

Scheme	Governing body	Launched	Geographic scope	Status	Registry model
Verra VM0036	Verra VCM	2017	Global; temperate peatlands	Operational; no validated European projects; one project under development and one project under validation[55]	Verra Registry
SOCIALCARBON SCM0010	Social Carbon Foundation	2024	Global; temperate agricultural peatlands	Operational; two projects	SOCIALCARBON Registry (Wilder Earth operated)
UK Peatland Code	Owned by IUCN National Committee UK; managed by IUCN UK Peatland Programme	2015	UK (England, Scotland, Wales, Northern Ireland)	Operational; 413 projects[56]	UK Land Carbon Registry
Valuta voor Veen	Stichting Nationale Koolstofmarkt (SNK)	2020	Netherlands	Operational; 19 projects[57]	SNK public register
MoorFutures	Respective states of Mecklenburg-W-P, Brandenburg, Schleswig-Holstein, Lower Saxony	2011	Germany (Mecklenburg-W-P, Brandenburg, Schleswig-Holstein, Lower Saxony)	Operational; 12 projects	No centralised registry
MoorFuturesFlex	State of Mecklenburg-W-P	2024	Applicable to projects in Germany; currently implemented and accepted in Mecklenburg-Western Pomerania	One pilot project	No centralised registry
Label Bas-Carbone – Peatland methodology	French Ministry for Ecological Transition	2026	Mainland France	Operational; no project identified	Public project list on the LBC website; credit registry only to project manager and stakeholders
Peatland Standard Ireland	PFI; independence in 2027	2025	Ireland	Pilot phase (2025–2027)	PFI-held during pilot, independent registry from 2027

The eight instruments differ more in track record than in design. The UK Peatland Code is the only scheme operating at scale, with 413 projects. Valuta voor Veen (19 projects) and MoorFutures (12 projects) operate at national or regional scale. The two international methodologies are open to projects across Europe but have little European track record: SCM0010 lists two projects, and no VM0036 project in Europe has completed validation. MoorFuturesFlex has one pilot project, the Peatland Standard for Ireland is in pilot until 2027, and no project under the Label Bas-Carbone peatland method has been identified.

Every scheme with an established European track record has public involvement. The four UK governments sit on the Peatland Code's Technical Advisory Board, SNK was set up under a government Green Deal, and German states own and sell MoorFutures. The Label Bas-Carbone is run directly by the French ministry. Registry models also diverge. Verra, SOCIALCARBON, the Peatland Code and SNK run public registries. MoorFutures has no registry, so certificates are retired at sale and cannot be traded. The Label Bas-Carbone credit registry is open only to project holders, financiers and auditors. The CRCF requires recognised schemes to keep publicly accessible, interoperable registries until the Union registry opens in 2028.

55 Verra, "Verra Registry," accessed 17 July 2026.
56 S&P Global, "UK Land Carbon Registry: Peatland Code Projects," accessed 14 September 2026.
57 Stichting Nationale Koolstofmarkt, Register projecten, 10 April 2024.

Eligibility and land criteria

Scheme	Minimum peat depth	Eligible peatland types	Eligible land use / activity	Minimum project size
Verra VM0036	Follows country-specific/FAO/IPCC definition of peatlands	Temperate peatlands	Drained peatlands; abandoned for min. two years	n/a
SOCIALCARBON SCM0010	30 cm	Temperate agricultural peatlands	Agriculture (incl. paludiculture) or retirement to conservation	n/a
UK Peatland Code	Bogs: min. 30 cm	Blanket bogs, raised bogs, fens	Peatland rewetting; no vegetation removal permitted (no paludiculture yet but under development)	n/a
Valuta voor Veen	n/a	Peat meadows	Agriculture (incl. paludiculture), nature conservation	n/a
MoorFutures	No fixed minimum, but 50 cm is recommended	Fens and bogs	Rewetting of drained peatlands; nature conservation or continued land use (incl. paludiculture)	5–10 ha (recommended)
MoorFuturesFlex	No fixed minimum; project-scenario areas where continued oxidation would exhaust the peat within 100 years are excluded from emission-reduction calculations	Drained, non-forested peatlands in the temperate climate zone	Rewetting, including stepwise implementation and adjustment of land-use options; post-rewetting land use must not conflict with the objective of reducing GHG emissions	n/a
Label Bas-Carbone – Peatland methodology	No fixed minimum; peat thickness must exceed expected 30-year subsidence	Minerotrophic and ombrotrophic peatlands degraded for 20+ years	Hydrological restoration raising the water table; former peat quarries 5 years after legal rehabilitation; afforested and cultivated peatlands under conditions; management-only measures and permanent flooding excluded	n/a
Peatland Standard Ireland	50 cm	Raised bog, blanket bog, bog woodland, heath, fens, plus modified forms (afforested, grassland-on-peat, cutover, cutaway)	Restoration/resilience activities across five ecosystem service categories	n/a

The schemes differ most on two questions: whether farming may continue after rewetting, and how much peat must remain. Continued agricultural use, including paludiculture, is eligible under SCM0010, Valuta voor Veen, MoorFutures and MoorFuturesFlex. The UK Peatland Code does not yet admit paludiculture. VM0036 is limited to land whose prior use was abandoned or no longer profitable, with narrow exceptions for continued agriculture. The Label Bas-Carbone method sets no rules on land use after restoration. The CRCF methodology admits paludiculture, subject to national nitrates action programmes, but bars fertiliser and manure for the rewetting practices themselves. Projects that plan to keep farming wet land therefore have the clearest route under SCM0010, Valuta voor Veen and the two MoorFutures methods.

On peat depth, three schemes use fixed minimums: 30 cm under SCM0010, 30–45 cm under the Peatland Code and 50 cm under the Peatland Standard for Ireland. MoorFuturesFlex and the Label Bas-Carbone instead tie eligibility to the peat remaining. MoorFuturesFlex excludes areas that would be depleted within 100 years, and the Label Bas-Carbone requires peat thickness to exceed 30 years of expected subsidence. The CRCF follows the same logic and ends the activity period at peat depletion time if this comes before 30 years. Former peat extraction sites are explicitly eligible under VM0036 (abandoned for at least two years), the Label Bas-Carbone (five years after legal rehabilitation) and the Peatland Standard for Ireland (cutover and cutaway bog). No scheme sets a binding minimum project size.

Additionality

Scheme	Minimum peat depth	Eligible peatland types
Verra VM0036	Regulatory additionality Financial additionality Common practice additionality	Full barrier analysis; no fixed percentage
SOCIALCARBON SCM0010	Regulatory additionality Financial additionality Common practice additionality	Common practice: <15% regional adoption rate. Financial: supplementary income >25% of costs requires robust justification; >50% creates a presumption against additionality
UK Peatland Code	Regulatory additionality Financial additionality	Max. 85% public funding; minimum 15% from private/carbon finance
Valuta voor Veen	Regulatory additionality Common practice additionality	Variant 3 (nature conservation): additionality only above existing subsidy obligations
MoorFutures	Regulatory additionality Financial additionality	No fixed threshold
MoorFuturesFlex	Regulatory additionality Financial additionality	No fixed percentage threshold. Additionality ends when permanent peatland rewetting becomes legally required and implemented; continued additionality must be demonstrated if the project duration is extended.
Label Bas-Carbone – Peatland methodology	Regulatory additionality Financial additionality	Total public aid ≤ 50% of total project costs; no credits for actions before project notification
Peatland Standard Ireland	Regulatory additionality Financial additionality	Max. 85% public funding; minimum 15% from private/carbon finance

All schemes require regulatory additionality. They differ in how they test financial need, which determines to what extent carbon revenue can be combined with public funding. The UK Peatland Code and the Peatland Standard for Ireland allow up to 85% of costs to come from non-carbon or public sources. The Label Bas-Carbone caps total public aid at 50% of project costs. SCM0010 requires robust justification once supplementary income exceeds 25% of costs and presumes a project is not additional above 50%. VM0036, MoorFutures and MoorFuturesFlex require a financial or barrier analysis without a fixed threshold. Valuta voor Veen has no financial test for agricultural land and relies on low water tables being common practice. A project financed mainly by public grants, such as EU LIFE funding, can therefore stay eligible under the Peatland Code or the Peatland Standard for Ireland but not under the Label Bas-Carbone or SCM0010 once public funding passes half of total costs.

Only VM0036, SCM0010 (below 15% regional adoption) and Valuta voor Veen test common practice. MoorFuturesFlex states explicitly that additionality ends once permanent rewetting becomes legally required, a provision relevant to national restoration plans under the Nature Restoration Regulation. The CRCF uses a cost or net-present-value test with no fixed public-funding cap. It requires projects to show that public funding would not have closed the gap. Activities started between 2023 and 2027 are deemed to meet its incentive-effect test.



Quantification methodology

Scheme	Main approach	Distinguishing feature
Verra VM0036	GEST primary; water table depth proxy allowed project-wide	N_2O included or shown to be insignificant
SOCIALCARBON SCM0010	GEST approach preferable, via two pathways (vegetation form or water table depth)	If GEST is not available, a methodology hierarchy is followed
UK Peatland Code	Condition categories (field-surveyed), UK GHG Inventory-aligned emission factors,[58] applied via the Peatland Code Emissions Calculator	Only scheme to include DOC and POC in emissions scope alongside CO_2/CH_4/N_2O
Valuta voor Veen	Single mandatory empirical formula[59]: CO_2 (t/ha/yr) = $-0.45 \times GMG \times FV + 0.088$; CH_4/N_2O from a lookup table[60]	The only scheme using one fixed formula rather than a classification framework (simplest, least flexible, but also least open to interpretation)
MoorFutures	GEST (vegetation-community proxy for GHG flux); ex-ante calculation for the full project duration	N_2O and DOC explicitly excluded from calculations
MoorFuturesFlex	GEST-based; continuously measured water levels interpolated across the site, complemented by vegetation surveys at least every five years	Relies more strongly on measured water levels than classic MoorFutures
Label Bas-Carbone – Peatland methodology	Subsidence proxy: Kniess (2008) subsidence rate × carbon stock above the dry-season water table × 80% mineralisation share; Tier 2 default (580 t C/ha/m) or Tier 3 stock measurements	Only scheme using peat subsidence as GHG proxy; ex-post project emissions from measured subsidence; N_2O excluded
Peatland Standard Ireland	Tier 3, results-based quantification via Field Protocol and Emission/Ecosystem Calculators	Only scheme quantifying five ecosystem service categories (carbon, water, biodiversity, community, wildfire) as a single bundled certificate

The schemes use four quantification approaches. VM0036, SCM0010, MoorFutures and MoorFuturesFlex use GEST vegetation proxies, with water table depth as an alternative or, under MoorFuturesFlex, as the main input. The UK Peatland Code and Valuta voor Veen use nationally calibrated factors: peat condition categories aligned with the UK greenhouse gas inventory, and a single groundwater–CO_2 formula for Dutch peat meadows. The Label Bas-Carbone uses peat subsidence. The Peatland Standard for Ireland uses Tier 3 water table or vegetation models within a multi-service accounting framework.

The gases covered also differ. N_2O is included under VM0036 (or shown to be insignificant), the Peatland Code and Valuta voor Veen, but excluded under MoorFutures and the Label Bas-Carbone. The Peatland Code includes dissolved and particulate carbon, MoorFutures excludes dissolved carbon, and the Label Bas-Carbone treats it as captured through subsidence. Because proxies, emission factors and gas scopes differ, credit volumes for comparable sites are not directly comparable across schemes.

The CRCF methodology accepts vegetation, water table and land-use proxies, as well as Commission-accepted models. It requires CO_2, CH_4 and N_2O to be reported separately, dissolved and particulate carbon to be included, and a default 10% uncertainty deduction for proxies. GEST and water-table methods are closest to these rules. Subsidence is not among the listed proxies.

58 Chris Evans et al., Aligning the Peatland Code with the UK Peatland Inventory, report to Defra and the IUCN UK Peatland Programme (2022, updated 2023).

59 Christian Fritz et al., "Meten is weten bij bodemdalingmitigatie" [Measuring is knowing in soil subsidence mitigation: Effect of water level management and crop choice on CO_2 emissions and peat oxidation], Bodem 27, no. 2 (2017): 20–22.

60 Gerald Jurasinski et al., "Greenhouse Gas Emissions," in Paludiculture – Productive Use of Wet Peatlands: Climate Protection – Biodiversity – Regional Economic Benefits, ed. Wendelin Wichtmann, Christian Schröder, and Hans Joosten (Schweizerbart Science Publishers, 2016), 79–93.

Risk buffer, uncertainty, and permanence

Scheme	Risk/non-permanence buffer	Uncertainty	Project duration
Verra VM0036	Project-specific, via the AFOLU Non-Permanence Risk Tool	Embedded in the same risk tool	40-year longevity period; crediting period 20–100 years; maximum tied to peat depletion
SOCIALCARBON SCM0010	Project-specific risk tool	n/a	10-year crediting period, renewable up to 9 times (max. 100 years total); minimum 50-year project longevity
UK Peatland Code	20% of net GHG reductions, pooled buffer	5% conservative buffer + 5% carbon-cost buffer	Minimum 30 years, maximum tied to peat depletion
Valuta voor Veen	15% ex-ante withholding until verification	10% risk correction	10 years (agricultural variants) / 50 years (nature variant)
MoorFutures	30% total (15% melting buffer released in two steps + 15% permanent)	n/a	30–50 years
MoorFuturesFlex	15% per verification period; releasable on justified application subject to approval	Conservative baseline and project-scenario quantification, plus a 15% risk reserve addressing scientific uncertainty in emission factors and the definition and stratification of site types	No fixed duration specified; long-term legal security is sought where possible but is not a precondition
Label Bas-Carbone – Peatland methodology	10% discount for ex-ante verification only	No explicit uncertainty deduction	30 years fixed; 30-year landowner agreement required
Peatland Standard Ireland	20%	10%, applied to model-derived metrics only (does not apply if project uses direct measurements)	Up to 100 years, maximum tied to peat depletion

Non-permanence provisions range from nonexistent to 30% of credits. VM0036, the Peatland Code and the Peatland Standard for Ireland pool buffers across projects, which spreads the risk of a single site failing. SCM0010, MoorFutures and MoorFuturesFlex hold buffers per project. Valuta voor Veen and the Label Bas-Carbone apply a buffer only to credits issued or verified ahead of realised reductions (15% and 10%), and none to ex-post credits. MoorFutures, which credits mostly ex-ante, holds the largest buffer (30%), half of which can be released once monitoring confirms results. Explicit uncertainty deductions exist under Valuta voor Veen (10%), the Peatland Standard for Ireland (10% for model-derived values), the Peatland Code and MoorFuturesFlex. SCM0010, MoorFutures and the Label Bas-Carbone have none. Project durations range from 10 years (Valuta voor Veen, agricultural variants) to 100 years (VM0036, SCM0010, Peatland Standard for Ireland). Project durations range from 10 years (Valuta voor Veen, agricultural variants) to 100 years (VM0036, SCM0010, Peatland Standard for Ireland). The CRCF caps the activity period at 30 years and prescribes no liability mechanism for soil emission reductions. No scheme covers re-drainage after the project period ends.



Registry and crediting model

Scheme	Unit name	Crediting model	Verification timeline
Verra VM0036	VCU (Verified Carbon Unit, 1 tCO_2eq)	Strictly ex-post	Verification covers no more than 6 consecutive years per event
SOCIALCARBON SCM0010	SCU (Social Carbon Unit, 1 tCO_2eq)	Strictly ex-post	Every 3 years
UK Peatland Code	PIU (Pending Issuance Unit, ex-ante); PCU (Peatland Carbon Unit, ex-post) (1 tCO_2eq)	Explicit two-stage ex-ante/ex-post model; PIUs tradeable but carry no offsetting claim until converted	First verification at 5 years, then every 10 years
Valuta voor Veen	SNK-verified certificate (1 tCO_2eq)	Blended: ex-ante issuance (85%); remaining released after verification	First verification within 5 years; then individual
MoorFutures	MoorFutures certificate (1 tCO_2eq)	Ex-ante calculation	First verification at 5 years, then every 10 years
MoorFuturesFlex	MoorFuturesFlex certificate (1 tCO_2eq)	Strictly ex-post	Each verification period covers at least one year but may cover multiple years
Label Bas-Carbone – Peatland methodology	Carbon credit (1 tCO_2eq)	Two routes: ex-ante verification of all 30-year reductions at year 5 if strict hydrological, vegetation and land-control criteria are met; otherwise ex-post, one third at each of years 10, 20 and 30	30 years fixed; 30-year landowner agreement required
Peatland Standard Ireland	Ecosystem Certificate (bundled, 1 tCO_2eq + co-benefits or 1 ha for shallow peat)	Strictly ex-post	First verification at 5 years, then every 10 years

The schemes follow three crediting models. VM0036, SCM0010, the Peatland Standard for Ireland and MoorFuturesFlex issue units only after verified reductions have occurred. MoorFutures, Valuta voor Veen and the Peatland Code issue part or all of their units before reductions occur and verify them later. The Peatland Code's Pending Issuance Units can be traded but support no offsetting claim until converted to Peatland Carbon Units. The Label Bas-Carbone issues nothing before year five. At that point, projects meeting strict criteria have all 30 years of reductions verified at once, while other projects receive one third at each of years 10, 20 and 30. Ex-ante units can pre-finance rewetting works but leave buyers with delivery risk. Ex-post units defer revenue until verification, so works need grants or bridge finance.

Implications for LIFE projects

LIFE projects have already tested carbon finance for peatland restoration. LIFE Multi Peat (Belgium, Germany, Ireland, the Netherlands and Poland) aimed to sell carbon credits, but most sites failed additionality tests because the carbon finance was not part of the financing strategy initially proposed. The project instead assessed the options and barriers in its five countries. Its Belgian site, Zwarte Beek, is certified under MoorFutures[61] and has sold credits and the Irish site may follow. LIFE PeatCarbon (Latvia, Finland, Denmark and Germany) works on the methodological side. It contributes to international standards and assessment tools in peatland restoration, and to an updated VCS methodology for rewetted peatlands in the Baltic Sea region.

LIFE SUPER EU aims to build shovel-ready pipelines in at least 15 countries. National schemes exist in only five European countries: the UK, the Netherlands, Germany (four states), France and Ireland (pilot). Elsewhere the current options are VM0036 for temperate peatlands and SCM0010-M1 for agriculturally used temperate peatlands. To be shovel-ready for carbon finance, a project must fit the eligibility criteria set out in those existing methodologies that are restricted by geographic constraints, project type and (former) land use. Carbon finance must be built into the financing strategy before projects start. Grant shares must stay below the scheme threshold.

61 EcoTree, "Zwarte Beek: EcoTree's First Peatland Restoration Project in Belgium," 1 July 2025.

Geographic gaps

The benchmarked schemes do not cover Europe evenly. Once the Delegated Act is in force, the CRCF methodology applies EU-wide, including boreal sites. However, no recognised scheme yet covers boreal sites. Both international standards are restricted to temperate peatlands. Verra's VM0036 is currently on hold since 2024 and reassessment including boreal sites is pending. No national scheme exists in any European boreal country. This leaves a gap for parts of the Scandinavian and Baltic countries, where peatland degradation is a prevailing problem.

National and regional schemes exist in the UK, the Netherlands, France, four peatland-dominant states in Germany, and Ireland (in the piloting phase). The lack of coverage in other countries is mainly due to the lack of reliable emission factors. Scandinavian countries, the Baltics, Poland, Belgium and Ukraine are all large emitters from degraded peatlands, yet no national scheme has been developed.

Super credits: Certifying multiple ecosystem services from peatland restoration projects

Peatland carbon projects are often presented through a single metric: avoided GHG emissions from rewetting drained organic soils. Yet the ecological and societal value of peatland restoration is broader. Rewetting can holistically improve water regulation and thereby reduce the impact of both wildfires and drought, provide flood control, avoid nutrient losses and leaching, regulate local temperatures, and protect biodiversity, water quality and habitat integrity. A peatland restoration project therefore delivers extensive and varied ecosystem services, not carbon outcomes alone.

While the CRCF methodology for peatland rewetting and most of the carbon schemes covered in this report already acknowledge co-benefits of peatland rewetting, those additional ecosystem services are not yet separately quantified and monetised.

Stacking vs. bundling

Two main approaches exist to combine and market multiple ecosystem services from one peatland restoration project:

- Bundling: several ecosystem services are packaged together and sold as a single credit unit to a single buyer. Additionality is assessed once for the bundle. In explicit bundling several benefits are quantified; in implicit bundling only one benefit is quantified and the others are assumed to be sold alongside it.
- Stacking: the same project generates separate credit units for different services (a carbon credit, a biodiversity credit, a water credit). These are sold separately, potentially to different buyers, in different markets, at potentially higher combined value. Each unit must independently satisfy its own market's additionality and demonstrate that the ecological outcomes are genuinely distinct and not the same benefit sold twice.

An additional term appears in the literature. Credit layering is used inconsistently, either as a synonym for stacking or referring to separate interventions on the same land generating separate credits. It has limited relevance for peatlands, where most outcomes result from a single intervention.

	Bundling	Stacking
Unit structure	One credit, several benefits	Separate credits per ecosystem service
Buyer	Single buyer	Same or different buyers
Additionality	Assessed once for the whole project	Must be demonstrated per unit
Double-counting risk	Low (ecosystem services not sold separately)	High (requires proven separability)
Revenue potential	Lower (ecosystem services not priced separately)	Higher (each ecosystem service has its own market)

Stacking and additionality challenges

A recurring discussion around quantifying and certifying multiple ecosystem services from one project site is the issue of selling the same environmental outcome twice. If a rewetting project is already viable and operational for carbon revenue, the biodiversity uplift, water quality improvement, and flood control benefits all occur anyway. Demonstrating their additionality as separate credits is then difficult.

Stacking rules exist but differ between schemes. For example, Verra allows nature credits to be stacked with VCS carbon credits if biodiversity additionality is shown independent of the carbon project. Peatland-specific guidance on proving separability is not yet developed.

This is why bundling is the more common and lower-risk model for peatlands to date. Separability and double-counting issues do not arise when services are sold as one unit. The trade-off is that bundling captures less of the potential market value of separate units.

Peatland Standard for Ireland approach

Among the schemes covered in this report, the Peatland Standard for Ireland is the first scheme to design a multi-ecosystem service credit from the outset. Its Ecosystem Certificate is a bundle of five quantified categories: carbon, water services, biodiversity, community, and wildfire reduction. It is the only peatland scheme that aims to quantify multiple ecosystem services issued as a single unit and organised through the SEEA EA accounting structure.

Outlook on demand for potential super credits

The willingness to pay for bundled multi-ecosystem service credits from peatlands remains unclear, as the concept largely exists in theory. The demand side is not uniform: different buyers value different services, and the evidence for each differs in quality and maturity.

Carbon-motivated buyers want the ton of CO_2-eq for a climate claim, and co-benefits may function only as a quality feature. A study of corporate motivations found that the primary motivation of a buyer is GHG reduction, followed by company market competitiveness and company values.[62] Survey evidence from project developers and brokers indicates that buyers increasingly expect impact beyond carbon tonnage. Biodiversity and community benefits are described as essential, and ICVCM Core Carbon Principles cited frequently.[63]

Water-motivated buyers may be the most promising demand side for stacking, because the water benefit is directly tied to their own operations and liabilities. Infrastructure exposed to flood risk (railways, airports, roads, water utilities)[64] a strong reason to pay for upstream water regulation. This is the one co-benefit with a documented precedent of actual payment. United Utilities' Sustainable Catchment Management Programme (SCaMP) has paid for peatland restoration since 2005 explicitly to protect water quality and catchment resilience.[65] Monitored outcomes include peak run-off reduced by 30% and slowed average run-off times. These payments sit outside the carbon credit, as bilateral PES contracts rather than tradeable units. As suggested in the Financing European Peatlands roadmap, infrastructure operators should enter long-term offtake contracts with peatland project developers to pay for their action.[66] Water may, over time, become a primary currency for peatland credits rather than a co-benefit.

The biodiversity market is in its early stages and demand for biodiversity as a separate unit remains very weak. The Biodiversity Credit Market Report 2026[67] finds demand is the binding constraint, while supply pipelines exist. No recorded cases of biodiversity credits used in corporate reporting exist. Globally, few buyers mention purchases publicly. The EIB Biodiversity Market study[68] surveyed corporate and financial institutions and found that half of respondents have bought carbon credits, while just one bought biodiversity credits and the likelihood of buying biodiversity credits in the future was found to be low. Respondents described carbon credits as easier comparable, quantifiable, affordable and transparent.

Bundling reduces transaction and administrative cost and bypasses the additionality problem of a stacked approach. However, buyers of those units may still be interested in buying primarily GHG reduction units and want co-benefits but not necessarily at the same price that a stacked approach could reach when targeting specific markets. Buyers with water liabilities may instead favour nature credits with water as the primary service and biodiversity as a co-benefit. No transactions yet provide evidence for this theory.

62 Jiehong Lou et al., "Corporate Motivations and Co-Benefit Valuation in Private Climate Finance Investments through Voluntary Carbon Markets," npj Climate Action 2 (2023): 32.
63 Ecosystem Marketplace, "VCM Demand Outlook in 2026," January 2026.
64
65 United Utilities, Accelerating Partnerships to Deliver Natural Solutions, Green Recovery scheme proposal GR0002, redacted version (2021).
66 Matt Robinson and Gokul Ganesh, Financing European Peatlands: A Roadmap towards an Institutional Asset Class, discussion paper (Landscape Finance Lab, 2026).
67 Pollination Foundation and bloomlabs, Voluntary Biodiversity Credit Markets Report 2026 (June 2026).
68 European Investment Bank, Scaling Biodiversity Markets: A Market Study (European Investment Bank, 2026).

LIFESUPEREU

Scaling Up Peatland Restoration in Europe