Wales Centre for Public Policy
Canolfan Polisi Cyhoeddus Cymru

Policy briefing
September 2025

Policy options to engage in Voluntary Carbon Markets

Introduction

Voluntary Carbon Markets (VCMs) in Wales offer the potential to mobilise finance for climate mitigation through the purchase of carbon units that represent either emissions reductions or removals, particularly in forestry, peatland restoration, and regenerative agriculture. However, concerns persist regarding the quality and credibility of VCM units.

On the supply side, governments can enhance the integrity of VCMs by stipulating minimum quality criteria for projects and requiring alignment with robust project accreditation standards. On the demand side, they can regulate how units are used and claimed. While the UK government is consulting on high-integrity voluntary carbon and nature markets, the Welsh Government is considering its own sustainable investment approach to finance nature-based solutions and achieve net zero targets.

The Welsh Government asked WCPP to investigate how other countries have developed schemes and policies, including regulations, relating to VCMs, and how lessons from these countries could be applied in Wales. We commissioned LSE Consulting, using staff from the Grantham Research Institute on Climate Change and the Environment, to undertake research focusing on:

- How VCMs have been used as a financing tool to support national decarbonisation and adaptation goals;
- How governments have designed policies to ensure market integrity;
- How risks – such as reversal, leakage, double counting, and land management issues – are managed; and
- How VCM policy design can incorporate co-benefits and just transition principles. aligned with the Well-being of Future Generations (Wales) Act 2015.

What are Voluntary Carbon Markets?

VCMs generate carbon units that are typically used to support voluntary climate goals, although in some cases they also contribute towards obligations within compliance mechanisms such as Emissions Trading Schemes (ETS) or international commitments like Nationally Determined Contributions (NDCs). Most carbon units are generated from land use and nature-based projects and are usually certified by international organisations that specialise in project accreditation. These organisations also host unit information on registries and facilitate trading.

Common concerns in VCM mitigation projects include a lack of environmental benefits ranging from non-additionality, low durability, insufficient considerations of leakage, and poor emissions accounting (e.g., Haya et al., 2023; Probst et al., 2024). The use of units that lack environmental

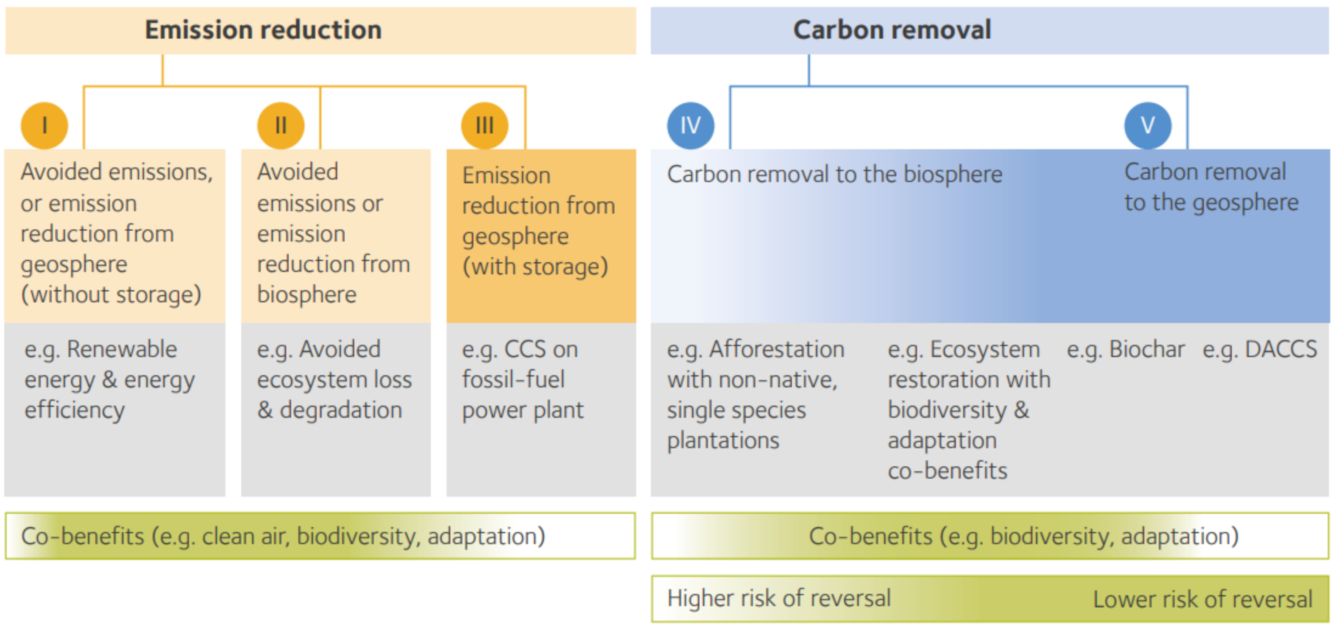

Figure 1: Taxonomy of carbon units and underlying activities (Axelsson et al., 2024: 24)

integrity can lead to accusations of greenwashing.

In response, initiatives such as the Integrity Council for the Voluntary Carbon Market (ICVCM) and the Voluntary Carbon Markets Integrity Initiative (VCMI) are working to establish stronger standards on both the supply and demand sides of VCMs. These standards emphasise that carbon units should complement, rather than replace, internal emissions reductions, especially in hard-to-abate sectors such as aviation, heavy industry, and agriculture.

Welsh policy context

Wales operates within the UK's broader carbon market framework, which includes:

- **UK Emissions Trading Scheme**: A compliance 'cap and trade' scheme that applies to energy-intensive industries, the power generation sector and aviation.
- **Woodland and Peatland Carbon Codes**: Voluntary certification standards for project development, monitoring, and credit issuance in woodland creation and peatland restoration. These units can currently only be used to offset UK-based emissions.

VCMs could provide a new source of finance to support afforestation, peatland restoration, and the agricultural transition – areas where Wales continues to fall short of its statutory targets under the Environment (Wales) Act 2016 and the benchmarks set by the Climate Change Committee (CCC). However, any engagement with VCMs must maintain environmental integrity, ensure meaningful community engagement and benefit sharing, avoid land use conflicts where possible, and align with the Well-being of Future Generations (Wales) Act 2015, which emphasises social equity, biodiversity, and long-term climate resilience.

Confidence that VCMs can deliver high-integrity projects that reduce or remove emissions has been challenged in both the media and scientific literature. Despite these challenges, interest in using VCMs to finance climate action at both state and non-state levels remains. Wales faces both opportunities and risks in deepening its engagement with VCMs; for example, by developing new ‘carbon codes’ or regulating what constitutes a ‘good project’ in Wales. Well-designed participation could attract private investment into high-integrity projects that deliver both climate and nature co-benefits. Conversely, poorly governed markets could undermine public trust and sustainability objectives. Learning from international experience is therefore valuable for shaping strategic policy as Wales seeks to meet its ambitious climate and nature recovery goals.

Findings from case studies

Four case studies were selected based on jurisdictional scale, demographic and economic factors, the existence of compliance carbon markets, and potential for mitigation in the land use and agriculture (AFOLU) sector.

Australia operates well-developed carbon markets comprising both compliance and voluntary schemes:

- **Australian Carbon Credit Unit (ACCU) Scheme**: supports projects that reduce or remove emissions using approved methodologies. Credits are tradable in both voluntary and compliance contexts, with most ACCUs issued through nature-based solutions, particularly vegetation regeneration.
- **Safeguard Mechanism**: ETS that applies to large industrial emitters, requiring them to reduce emissions or meet obligations by surrendering Safeguard Mechanism Units or ACCUs. Offset use is capped at 30% of a facility’s annual emissions liability, encouraging prioritisation of direct abatement.

Recent reforms, following the 2022 *Chubb Review*, aim to strengthen integrity by enhancing governance, increasing transparency, and retiring over-credited methodologies. Complementary measures include:

- **Nature Repair Market**: Enables trading of biodiversity certificates alongside carbon credits.
- **Climate Active programme**: A government sponsored scheme certifying organisational decarbonisation.

Finland recognises the need for high-integrity carbon units to avoid greenwashing and ensure alignment between VCMs and national climate goals.

The 2023 **Finnish Guide to Good Practices** outlines supply- and demand-side integrity rules grounded in EU legislation and international standards (Laine et al., 2023). Key principles include additionality, permanence, robust quantification, and credible claims. The Guide discourages using offsets as substitutes for real emissions reductions and promotes contribution claims towards national targets.

Finland is also scaling up nature-based durable removals through public funding and initiatives like the **Catch the Carbon** programme. It is further exploring engagement with Article 6 of the Paris Agreement and investing in removal technologies such as biochar, with a focus on developing methodologies suited to domestic conditions and accessible to local stakeholders.

Portugal launched its domestic VCM (MVC) in 2024 to support climate neutrality and land-sector goals. Operating outside the EU ETS and international carbon markets, the MVC has several defining features:

- Units generated under the MVC must remain within Portugal and are intended for voluntary use only – not for compliance or international trading.
- The market prioritises removals in forestry and agriculture, particularly in vulnerable territories, with growing

interest in blue carbon and biodiversity co-benefits.
- High-integrity is enforced through public methodologies, MRV protocols, and a national registry, tailored to reflect national circumstances.
- To manage reversal risks, the MVC employs insurance mechanisms, buffer pools, and a tiered guarantee fund.

Scotland supports VCMs as a key mechanism for climate finance, particularly for land-based carbon removals such as peatland restoration and afforestation.

The **Woodland Carbon Code** and **Peatland Code** are government-endorsed domestic standards, widely applied in Scotland. Though financed through voluntary action alone, both contribute to national climate goals through certified removals recorded in the National Greenhouse Gas Inventory. They allow ex-ante and ex-post crediting, with standards aligned to international benchmarks.

Credits are traded domestically and are not eligible for compliance or international offsetting. Both codes are exploring formal recognition (e.g. ICVCM, ISO).

Scotland also promotes market integrity and social equity through:

- The Principles for Responsible Investment in Natural Capital and the Natural Capital Market Framework, which emphasise ethical investment, biodiversity, landowner accountability, and community benefits;
- Mandatory adherence to national standards under the WCC (e.g. the UK Forestry Standard) and permanence safeguards such as risk buffers and conservation covenants; and
- The Community Inclusion Standard Best Practice Guide and 'unit tagging' to recognise and track biodiversity and social co-benefits.

Reflections for Wales

The case studies highlight diverse approaches to VCMs and offer practical lessons for how Wales can engage with VCMs to advance its climate and nature goals, while aligning with the Well-being of Future Generations (Wales) Act 2015 and net zero Wales commitments. Key reflections include:

Financing Nature-Based Solutions

- Wales can use VCMs to meet targets for peatland restoration, woodland creation, and other land-based carbon removals, that cannot be met through existing public or private finance sources.
- Lessons from Scotland's Woodland Carbon and Peatland Codes, Australia's ACCU Scheme, and Portugal's more regulated voluntary markets highlight the importance of integrating VCMs within national land-use policies and ensuring projects clearly demonstrate additionality beyond existing mitigation and adaptation measures.

Linking Biodiversity and Carbon Markets

- Case studies demonstrate a growing emphasis on environmental co-benefits, linking nature and carbon markets or adding a price premium to units with recognised co-benefits.
- Wales can build on relevant principles such as Scotland's Natural Capital Market Framework and align with UK-wide integrity guidance to support nature-positive, and socially responsible investments.

Design of VCMs

- Wales should explore whether to issue guidance on international market participation for non-state actors or to

develop new domestic voluntary carbon schemes (in addition to the existing Woodland and Peatland Codes).
- A clear separation between any new VCMs and compliance markets like the UK ETS is critical to avoid double counting. However, alignment with UK and EU standards (e.g. the EU Carbon Farming and Carbon Removal scheme) will support market credibility and interoperability.
- A voluntary approach should be supported by clear government-endorsed standards to balance flexibility and credibility. Public consultation is essential to assess stakeholder readiness and demand for more formal regulatory structures.

Operationalising VCMs

- Effective implementation of government-endorsed VCMs requires the establishment of clear standards for credit generation and claims.
- If new VCMs are required to meet decarbonisation aims, Wales should align its approach, including standards, with UK schemes such as the Woodland and Peatland Carbon Codes, to reduce complexity and build investor confidence, while ensuring local land use goals are addressed.
- Engaging meaningfully with VCMs, by actively designing minimum standards or regulating aspects of credit supply and use, offers Wales an opportunity to show how private finance, channelled through VCMs, can act as an ancillary mechanism to deliver on economy-wide and land sector decarbonisation targets.

Creating environmental and social co-benefits

- Wales is uniquely positioned to embed just transition principles into VCMs due to its legal obligations under the Well-being of Future Generations Act.
- This offers Wales the opportunity to go further than its peers in ensuring that VCMs benefit rural communities, support good-quality jobs, and build social trust in carbon finance.
- Scotland's benefit-sharing protocols provide a strong foundation in this regard, which Wales can build upon by formalising equity safeguards in future VCM policy instruments.

Conclusion

VCMs and nature markets are becoming increasingly important tools for supporting domestic climate priorities, enhancing carbon sinks, restoring ecosystems, and contributing to sustainable development goals. While challenges remain around additionality, permanence, and claim integrity, adaptive governance in countries such as Australia, Finland, Portugal, and Scotland shows that VCMs can serve as additional sources of finance for mitigation activities, particularly carbon sequestration and nature recovery. However, all cases emphasise the need to minimise reliance on international carbon units and to use VCMs to complement, not replace, deep domestic emissions reductions.

Wales's robust legislative framework, including the Environment (Wales) Act 2016 and the Well-being of Future Generations (Wales) Act 2015, positions it well to engage meaningfully with VCMs and unlock private finance for peatland restoration and woodland creation. Although Wales currently relies on UK-wide schemes such as the Woodland and Peatland Carbon Codes to finance these activities, it has the opportunity to develop a more tailored approach to VCMs, informed by new UK integrity principles for carbon and nature markets.

Lessons from international case studies underscore the value of embedding ethical investment and community inclusion (as seen in Scotland), adopting clear guidance on contribution-based claims (as in Finland), and establishing transparent public governance (as in Portugal). These insights can help Wales develop credible, effective, and equitable VCM policies.

References

Axelsson, K., Wagner, A., Johnstone, I., et al. (2024). **Oxford principles for net zero aligned carbon offsetting (revised 2024).** Smith School of Enterprise and the Environment, University of Oxford. Retrieved from: https://www.smithschool.ox.ac.uk/sites/default/files/2024-02/Oxford-Principles-for-Net-Zero-Aligned-Carbon-Offsetting-revised-2024.pdf

Haya, B.K., Evans, S., Brown, L., et al. (2023). **Comprehensive review of carbon quantification by improved forest management offset protocols.** Frontiers in Forests and Global Change, 6.

Laine et al., 2023 Laine, A., Airaksinen, J., Yliheljo, E., et al. (2021). **Regulation of voluntary carbon offsets.** Finnish Government. Retrieved from: https://julkaisut.valtioneuvosto.fi/handle/10024/163347

Probst, B.S., Toetzke, M., Kontoleon, A., et al. (2024). **Systematic assessment of the achieved emission reductions of carbon crediting projects.** *Nature Communications*, 15(1), 9562.

Find out more

For the full report see: Mercer, L., Kuci, S., and Macquarie, R. (2025). Policy options to engage with Voluntary Carbon Markets. Cardiff: Wales Centre for Public Policy.

About the Wales Centre for Public Policy

Here at the Centre, we collaborate with leading policy experts to provide ministers, the civil service and Welsh public services with high quality evidence and independent advice that helps them to improve policy decisions and outcomes.

Funded by the Economic and Social Research Council, Welsh Government, and Cardiff University, the Centre is based at Cardiff University and a member of the UK's What Works Network and the Universities Policy Engagement Network (UPEN).

For further information contact:

Dr Helen Tilley

info@wcpp.org.uk

Wales Centre for Public Policy

Cardiff University, Sbarc/Spark, Maindy Road, Cardiff CF24 4HQ

www.wcpp.org.uk

029 2087 5345

info@wcpp.org.uk

@WCfPP