Additionality in carbon market projects

What is it and why does it matter?

Peatland restoration on Wildland Limited's Glenfeshie Estate, Cairngorms Connect © scotlandbigpicture.com

Carbon financing is an increasingly common funding stream for projects which aim to conserve and/or restore nature. Carbon financing intends to mobilise private sector financing into these projects at scale. This is done through the sale of 'carbon credits' which represent one tonne of CO_2e that has either been avoided (e.g. by protecting at-risk forests) or removed (e.g. sequestered into the soil through restoring peatlands). These transactions allow the sellers (or carbon projects) to gain income, whilst the buyers (typically private companies or individuals) can offset their residual emissions.

Carbon markets are under increased scrutiny to ensure that the carbon credits financed by these mechanisms are creating additional climate benefits. The climate change mitigation benefits of a project should not have taken place without the carbon financing. There have been some high-profile examples of projects inflating their baselines (or perceived risk) to increase the carbon credits they can generate, which are often bought by large polluting corporations (e.g. oil and gas, or aviation companies). Rightfully, carbon standards and markets are under pressure to ensure that any credits aren't simply 'hot air' and that sales truly benefit the climate. Buyers are also increasingly looking for 'high-integrity' credits from projects with strong environmental and social safeguards (e.g. safeguards relating to gender equity and the rights of Indigenous Peoples and local communities).

Restoration projects looking to finance some of their activities through carbon markets are increasingly aware of the debate around additionality. Ensuring the project robustly addresses these concerns from the outset is a strongly recommended practice. However, the requirements around additionality vary by type of project, methodology and standard which can be confusing for those developing projects.

This guidance aims to answer some of these questions to help projects navigate additionality requirements and produce high integrity credits which attract high quality buyers.

What is additionality?

A project is additional if the carbon emissions avoided or removed would ***not*** have occurred without the project taking place. For carbon projects funded through the voluntary carbon market (VCM) projects must be **biophysically, legally, and financially additional**.

To be **biophysically additional**, the project must reduce or sequester more greenhouse gas emissions than would have occurred without project interventions taking place. For example, additional trees

planted will sequester additional carbon into their biomass and soils compared to a scenario where they are not planted.

To be **legally additional**, there must be no legal requirement for the project activities to take place. These legal requirements can include "laws, statutes, regulations, court orders, environmental decisions, planning decisions or other legally binding decisions requiring the projects implementation, or the implementation of measures that would achieve equivalent levels of sequestration or greenhouse gas emissions reductions"[1]

To be **financially additional**, the additional emissions reductions or removals will not occur without the revenue from the sale of carbon credits over the duration of the project. Here, projects may be asked to demonstrate the implementation costs they will occur over the project lifetime as well as their expected revenues from both carbon finance and non-carbon finance sources (such as grants or donations). The project is financially additional if it would not be financially viable without the sale of carbon credits contributing to covering its implementation costs. Other options can include demonstrating that the restoration intervention is not the most financially attractive option for that area of land (such as grazing or other agricultural uses). A project may have some costs already covered through other sources, such as grants, to implement their interventions. To be eligible for carbon finance, they will need to demonstrate how carbon finance will ensure project outcomes are achieved. Other options can include financing the expansion of existing projects through carbon finance or focusing on sub-compartments of a larger project that are not covered by existing finance.

How bad is the problem?

Despite potential issues with additionality, many agree that carbon markets are still a vital mechanism for channelling large sums of money to projects which are doing good work on the ground. However, to achieve the goals of the Paris agreement it is imperative that the potential climate mitigation benefits of protecting and restoring natural habitats is realised, and the additionality of projects is key to this objective.

Selling credits based on perceived or inflated additionality can damage a project's reputation. Buyers are increasingly aware of the poor public perception of engaging with projects which aren't providing true additional climate benefits to claim their offsets. Buyers want to know that their investment has enabled increased carbon emission reductions or removals compared to what would have happened without the project. Having a high-integrity project where carbon financing clearly contributes to achieving the project outcomes is fundamental to attracting the right type of buyer who is willing to pay a high carbon credit price.

How can additionality be measured?

Typically, additionality is based on comparing project outcomes to a theoretical scenario, where the project would not have taken place. This scenario, known as the baseline or counterfactual scenario, can be challenging to define. Additional avoided emissions and removals are those which occur beyond the baseline scenario.

[1] https://woodlandcarboncode.org.uk/standard-and-guidance/1-eligibility/1-6-additionality

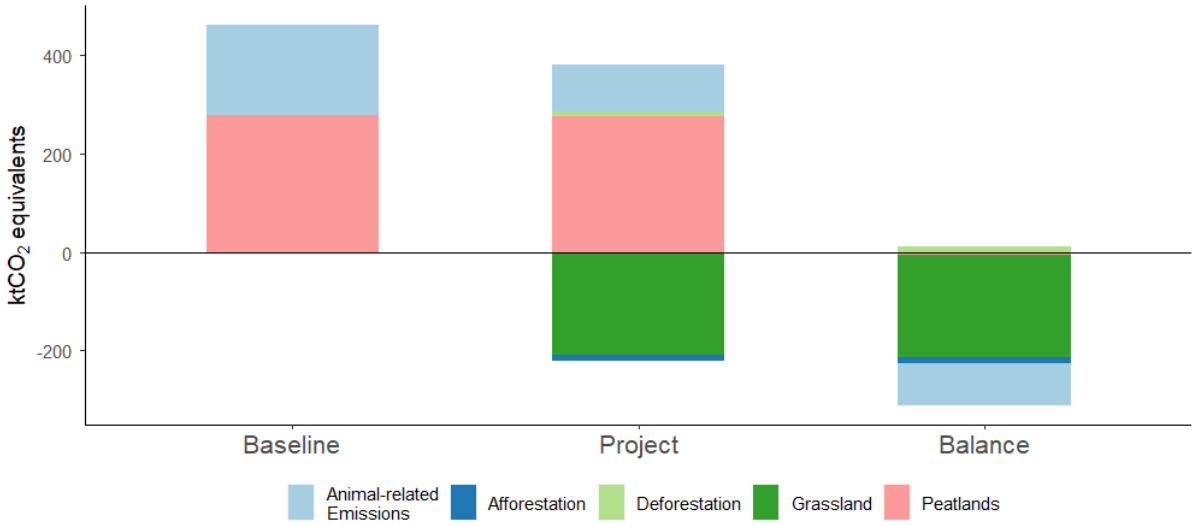

Figure 1: Example baseline scenario and project emissions for a landscape restoration project. The balance represents the additional climate benefits from the project interventions.

Carbon standards will have their own guidelines and requirements for measuring additionality, and this may vary by the type of intervention (e.g. forest protection vs. restoration) and the type of ecosystem (e.g. peatlands vs. seagrass meadows).

Restoration projects are less likely to be affected by the problem of inflated baselines, as any restoration intervention is likely to be additional compared to the project not taking place. However, it is important that a project is transparent about how these activities are funded and whether the project might generate funds in other ways (e.g. commercial plantation activities, grants or donations).

Carbon standards will only consider projects additional if they apply approved restoration interventions and follow approved baseline and monitoring methodologies. It is important that projects are not converting natural ecosystems to non-natural ones for the purpose of generating a revenue from carbon. This will likely have negative impacts on local biodiversity as well as communities who interact with the landscape and the services they provide.

What tools are available?

If a carbon standard has already been identified for your project, they may have tools and resources available to demonstrate the additionality of the carbon project.

Approaches to demonstrating financial additionality include the use of analysis tools such as Net Present Value (NPV) and Internal Rate of Return (IRR) to compare scenarios where carbon finance is and isn't used to fund project activities, or to compare to alternative land uses.

For example, the UK Woodland and Carbon code require that projects pass the Legal and Investment Test using their cash flow calculator to demonstrate their additionality[2]. Projects are allowed to have several sources of income and must state the relative proportions of these.

[2] https://woodlandcarboncode.org.uk/standard-and-guidance/1-eligibility/1-6-additionality

For other projects, tools such as the CDM Combined Tool may be used to identify the baseline scenario and calculate the projects additionality. The tool takes the user through a stepwise approach for assessing additionality, including[3]:

- Demonstration whether the proposed project activity is the first-of-its-kind;
- Identification of alternatives to the project activity;
- Investment analysis to determine that the proposed project activity is either: 1) not the most economically or financially attractive, or 2) not economically or financially feasible;
- Barriers analysis;
- Common practice analysis.

Verra have produced an adapted version of the CDM tool for their agriculture, forestry and other land use (AFOLU) projects.

How do I define my baseline scenario?

Your baseline scenario defines what would happen without your project taking place.

When defining the baseline scenario, it is important that a conservative approach is taken. In doing so, the project reduces the risk of their benefits being overstated. Where possible, direct evidence or quantified data (such as legal harvesting rates) should be used to justify the baseline scenario. Any significant difference between the baseline and project scenario should be explained by the project interventions.

Are there any other aspects of additionality to consider?

In some cases, carbon certification standards may ask for a review of other barriers to successfully completing the project. These can go beyond the financial barriers the project hopes to address through VCMs to include legal, social, environmental, administrative and technological barriers. The financing from sale of credits may help a project overcome these barriers. These can also be used by the standard to judge the likelihood of these barriers reversing or reducing the impact of the project activities, and the permanence of the carbon being sequestered.

The requirements for these can vary by carbon standard but should be listed in their handbooks or methodology documents.

Can carbon financing be part of a diverse income portfolio?

For many restoration projects, carbon financing is just a proportion of their overall revenue, so it is possible to include it alongside other funding. However, this depends on how much of the project costs can be covered by other funding, and the requirements of the chosen carbon standard.

Carbon financing can be a means to scale up project activities (e.g. increase the area covered) or address financing gaps to implementing the project over the medium to long term. For example, projects may have funding through grants or donations to begin their work but need to secure additional revenue streams to continue.

[3] https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v7.0.0.pdf

Restoration, particularly in the early implementation stages, can be expensive. Many carbon standards allow carbon financing to be part of a mixed portfolio of income as carbon alone may not be enough to cover the costs of implementing restoration projects. Therefore, several have minimum funding requirements for a project to justify accessing carbon financing. For example, the UK Peatland Code requires that at least 15% of the project cost over its duration is covered by carbon finance[4].

Successful restoration interventions may result in increased income from other sources, such as eco-tourism. These need to be accounted for when demonstrating additionality to ensure project transparency. Projects need to account for all expected income sources when planning their carbon projects. For example, the UK Woodland Carbon Code requires projects to complete a cashflow document to demonstrate eligibility[5].

Figure 2: The replanting of native woodlands on clear-cut land in the Carpathian Mountains, Romania. Photo credit: FCC

[4] https://www.iucn-uk-peatlandprogramme.org/sites/default/files/2022-05/Peatland%20Code%20v1.2_3.pdf
[5] https://www.woodlandcarboncode.org.uk/standard-and-guidance/1-eligibility/1-6-additionality

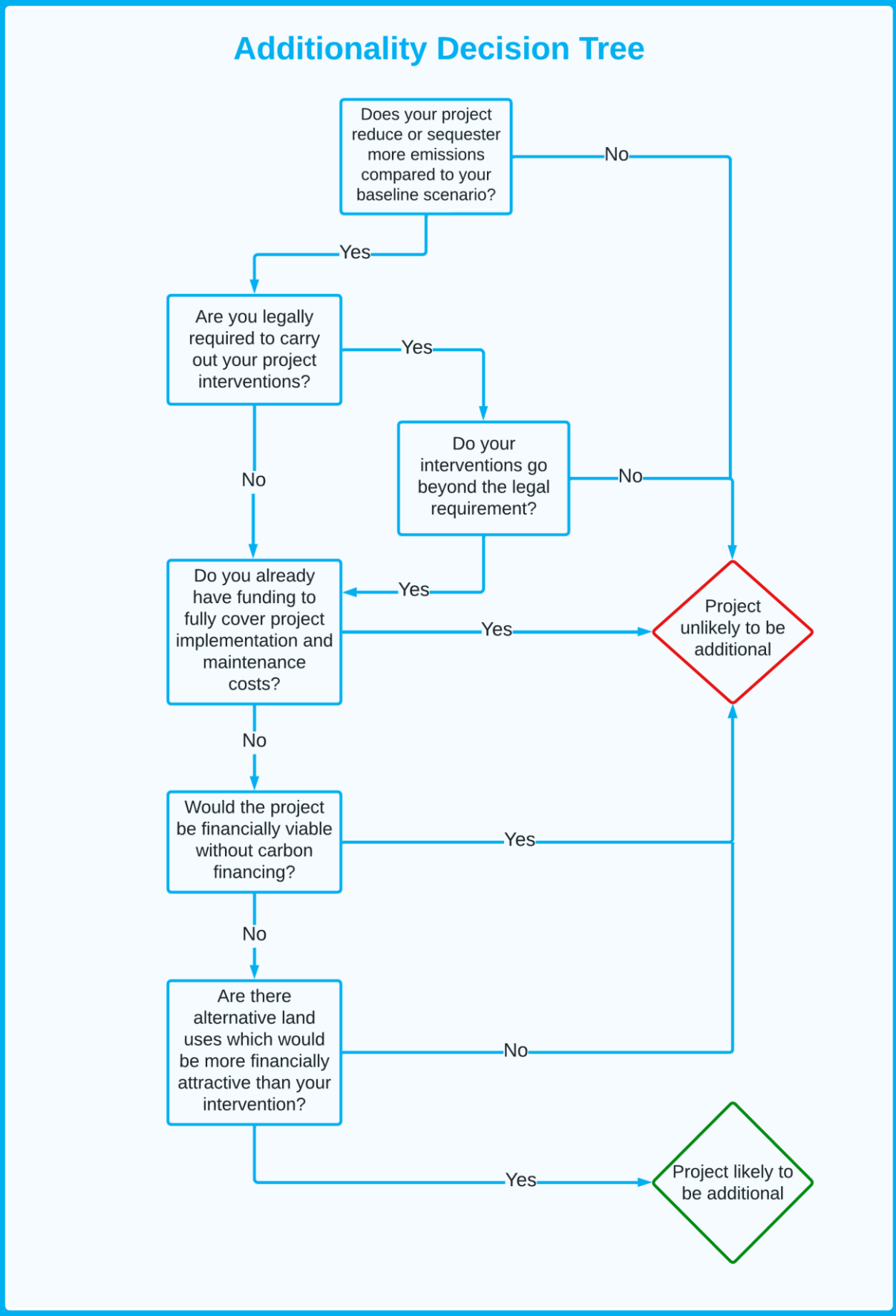

Figure 3: Basic additionality decision tree. Additionality compliance can vary by carbon certification standard, if a standard has been selected their requirements must be followed.

Further reading

Sylvera additionality guidance

Carbon Credits and Additionality (worldbank.org)

World Bank Document (p. 57)

What Makes a High Quality Carbon Credit (edf.org) (p. 9)

Dies ist der Titel (carboncreditquality.org) (p. 17)

TSVCM_Public_Consultation.pdf (iif.com) (p. 56)

UK Woodland Carbon Code additionality eligibility guidance and tool

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