

# From Carbon to Nature

What the biodiversity markets  
can learn from the voluntary  
carbon market?



Compensate  
Foundation

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# Foreword

# Foreword

As an environmental scientist with a background in environmental policy, I follow the emerging biodiversity markets with great interest. I researched ecosystem services, a buzzword of that time, a decade ago. And now, as the Policy and Advocacy Lead at the Compensate Foundation, I am working for the better integrity of the voluntary carbon market (VCM). The nascent biodiversity markets are at the crossroads of the two worlds.

I approach the biodiversity markets from a pragmatic point of view. On one hand, we should use all available resources to preserve and restore biodiversity on the planet, including the private sector's finances. On the other hand, there are good arguments for not monetizing nature and trying to convert its value into over-simplistic metrics and credits.

The voluntary biodiversity markets have an enormous potential, but huge risks are involved. We have seen that voluntary nature markets do a lot of good but can also lead to harmful practices and counterproductive impacts. Stakes are high, and the emerging markets need to get things right from the start.

The Compensate Foundation has been a critical voice demanding better integrity of the VCM. Since 2020, it has evaluated over 170 nature-based climate projects and has become very familiar with the possibilities, risks, and pitfalls of the VCM. Over 90% of the projects evaluated failed Compensate Foundation's strict quality criteria, most commonly due to the lack of additionality, unreliable baselines, and permanence risks.

Following the evolution of the nascent biodiversity markets, we feel the urgency to demand better integrity from the start. It is imperative to learn from the experiences of the VCM and avoid repeating its mistakes. It would be a wasted opportunity to not take advice from the good and bad practices of the VCM.

Much of the ongoing discussion about biodiversity markets is about metrics and credits. A robust and credible unit is fundamentally important, but addressing other quality issues of nature-based projects is crucial, too. The demand side of the market, or the claims, should be discussed more.

Ecologists have the best knowledge to quantify biodiversity and assess the strengths and weaknesses of each approach. So, we will not propose methods for calculating biodiversity metrics. Instead, we discuss the implications of biodiversity's complex, non-fungible nature to the market as a whole.

We hope our insights from the VCM, outlined in this white paper, can contribute to building transparent and high-integrity biodiversity markets.

**Janne Rinne**  
Policy and Advocacy Lead  
The Compensate Foundation



A close-up photograph of a forest floor covered in lush green ferns. The fern fronds are delicate and textured, creating a sense of depth and texture. Sunlight filters down from the canopy above, casting dappled light and shadows through the leaves, which creates a warm and mysterious atmosphere.

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# Introduction

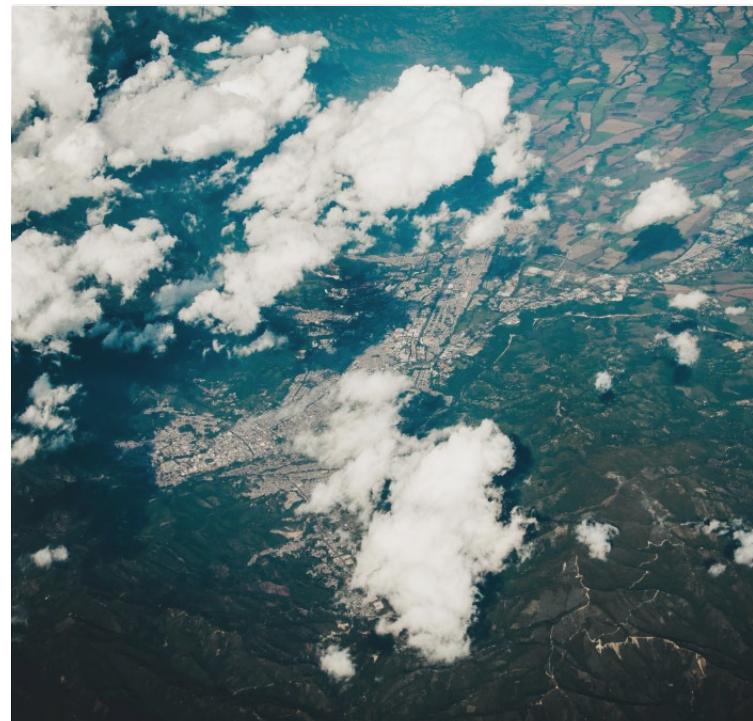
# 1

## Introduction

Humans are putting increasing pressure on Earth's ecosystems, with alarming projections for the future. Recent research, published in *Science*, suggests that six of the nine planetary boundaries have been crossed, suggesting that Earth is outside of the safe operating space for humanity.

The ecological crisis cannot be solved by governments alone. There is an urgent need to channel all available resources to mitigating climate change and protecting nature, its species, habitats, and ecosystem functions.

A comprehensive study by the Paulson Institute found that we should spend an additional 598–824 billion USD annually to reverse the biodiversity crisis by 2030.



As one response, we are witnessing the birth of new **biodiversity markets**, which channel private funding to biodiversity conservation and regeneration.

The aim of the biodiversity markets is to support ecosystem restoration, conservation, reforestation and afforestation, and the sustainable management of ecosystems. Biodiversity credits are expected to play a key role in the markets.

## **Project developers, intermediaries, investors, venture capital firms, and governments are looking for opportunities in the biodiversity markets.**

The period to the end of 2024 will be pivotal for the nascent markets.

The decisions taken in the coming months will determine their direction, scale, and credibility.

The Compensate Foundation welcomes the biodiversity markets which promise to provide new means to finance preservation and restoration of biodiversity. However, serious risks are involved and the markets can do much harm, if implemented badly.

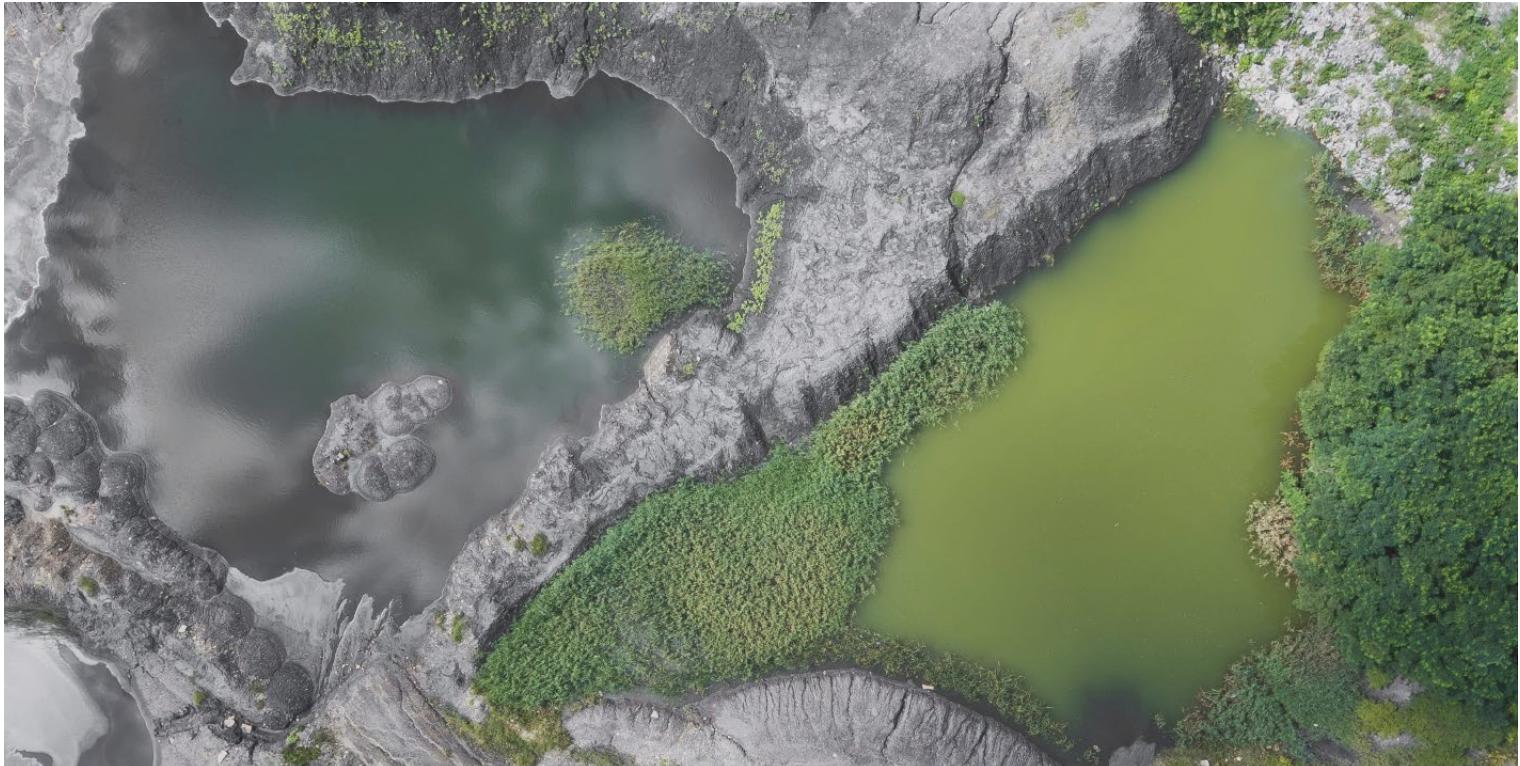
## **The biodiversity markets have a lot in common with the VCM.**

However, biodiversity is a much more complex concept than carbon. It is inherently local and not fungible in the same way. As seen in the following sections, this has implications for the biodiversity markets' development.

The VCM has grown in recent years, as many companies and other organizations have purchased carbon credits as part of their climate strategies. Carbon neutrality and net zero commitments have become mainstream in corporate responsibility roadmaps.

## **The VCM has recently been the subject of significant turmoil and scrutiny.**

The market is grappling with a series of systemic flaws and challenges that threaten its very existence. Journalists and scientists have revealed problems in carbon projects and credits, including overcrediting, unreliable baselines, leakage, lack of additionality and permanence.



The most recent critical studies include [Berkeley's study](#) and [West's research](#) on REDD+ projects, and [analysis of carbon projects by Corporate Accountability](#) and [the Guardian](#).

Negative publicity on nature-based carbon projects has undermined the trust, both in buyers and investors. The VCM has shrunk for the first time in seven years, opposite to earlier projections for steep growth.

The implications are far-reaching, affecting not only the VCM but also corporate climate commitments, consumer trust, and regulatory demands. Confidence in the unregulated VCM is eroding, making companies reconsider their climate commitments. Unfortunately, good projects with real positive climate impact face the consequences, too.

**The biodiversity markets can avoid the similar risks if they prioritize transparency and integrity from the very start.**

The biodiversity markets evolve at an overwhelming speed, and information becomes outdated fast. However, we believe the key lessons of this white paper will remain relevant in the near future.

## The Voluntary Carbon Market (VCM)

The Voluntary Carbon Market (VCM) offers a platform for companies and organizations to take accountability for emissions they cannot avoid. Within the VCM, entities financially support mitigation projects by buying certified carbon credits.

Typically, the credits are used by organizations that offset their carbon footprints. However, the use of carbon credits is not limited to offsetting. The credits can be used for climate contributions and beyond value chain mitigation or be purchased without public climate claims involved.

Offsetting primarily involves the acquisition of certified carbon credits, with each credit, in theory, representing the avoidance or removal of one metric ton of greenhouse gases from the atmosphere. Carbon credits are certified by international carbon standards like Verra and Gold Standard. Project developers implement activities that either reduce emissions or capture greenhouse gases, and these actions are documented and translated into carbon credits that are traded within the voluntary carbon market.

Carbon credits are generated through various carbon projects aimed at emission reduction, such as forest protection or renewable energy initiatives, or by removing carbon dioxide from the atmosphere, such as reforestation or carbon-storing agricultural practices. The term 'mitigation outcome' refers to the emission reductions and carbon removals achieved by these projects.

Credit buyers communicate their climate actions with climate claims. Most abundant climate claims are carbon neutrality and net zero claims, but recently, so-called non-offset claims are gaining traction. These claims go beyond conventional carbon offsetting, encompassing diverse climate actions such as contribution claims, beyond value chain mitigation (BVCM), climate finance, climate action, and insetting.

To learn more about the VCM, please see our recent white papers about the integrity of the market and non-offset claims.

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## 2

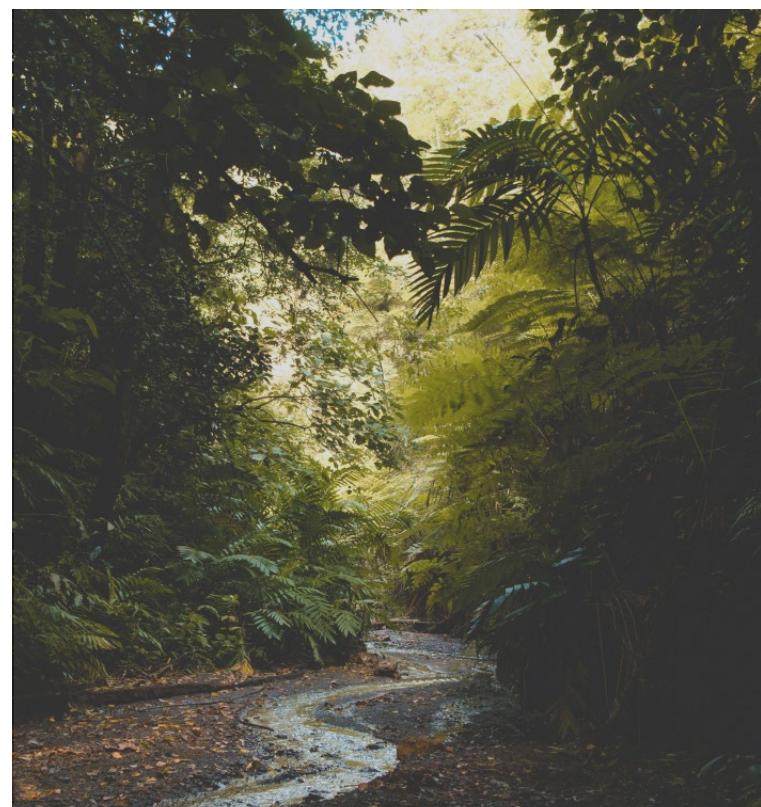
# Biodiversity Markets

Nature markets encompass many financial instruments for incentivizing nature-positive action, such as conservation finance, biodiversity-positive carbon credits, payments for ecosystem services, and biodiversity offsets and credits. This section focuses on the **biodiversity markets** based on trading biodiversity credits.

## Nascent biodiversity markets

The biodiversity markets are a means to direct private sector funding towards actions that preserve, restore, and regenerate biodiversity.

The Kunming-Montreal Global Biodiversity Framework (GBF), adopted under the Convention on Biological Diversity (CBD), includes four goals and 23 targets to be achieved by 2030.



The framework's target 19 aims to increase financial resources to implement national biodiversity strategies and action plans by 2030, mobilizing at least 200 billion USD annually. The target aims to stimulate innovative financial schemes such as payment for ecosystem services, green bonds, biodiversity offsets and credits, and benefit-sharing mechanisms with environmental and social safeguards.



**Biodiversity offsets** and **biodiversity credits** are very similar instruments to what carbon credits are in the VCM. Biodiversity credits and offsets are complementary means to protect and regenerate biodiversity, not substitutes for other conservation measures.

For the time being, the scale of biodiversity markets is small. According to BloombergNEF, the eight most developed biodiversity credit schemes covered only 800,000 hectares, with only 8 million USD pledged for funding in May 2023.

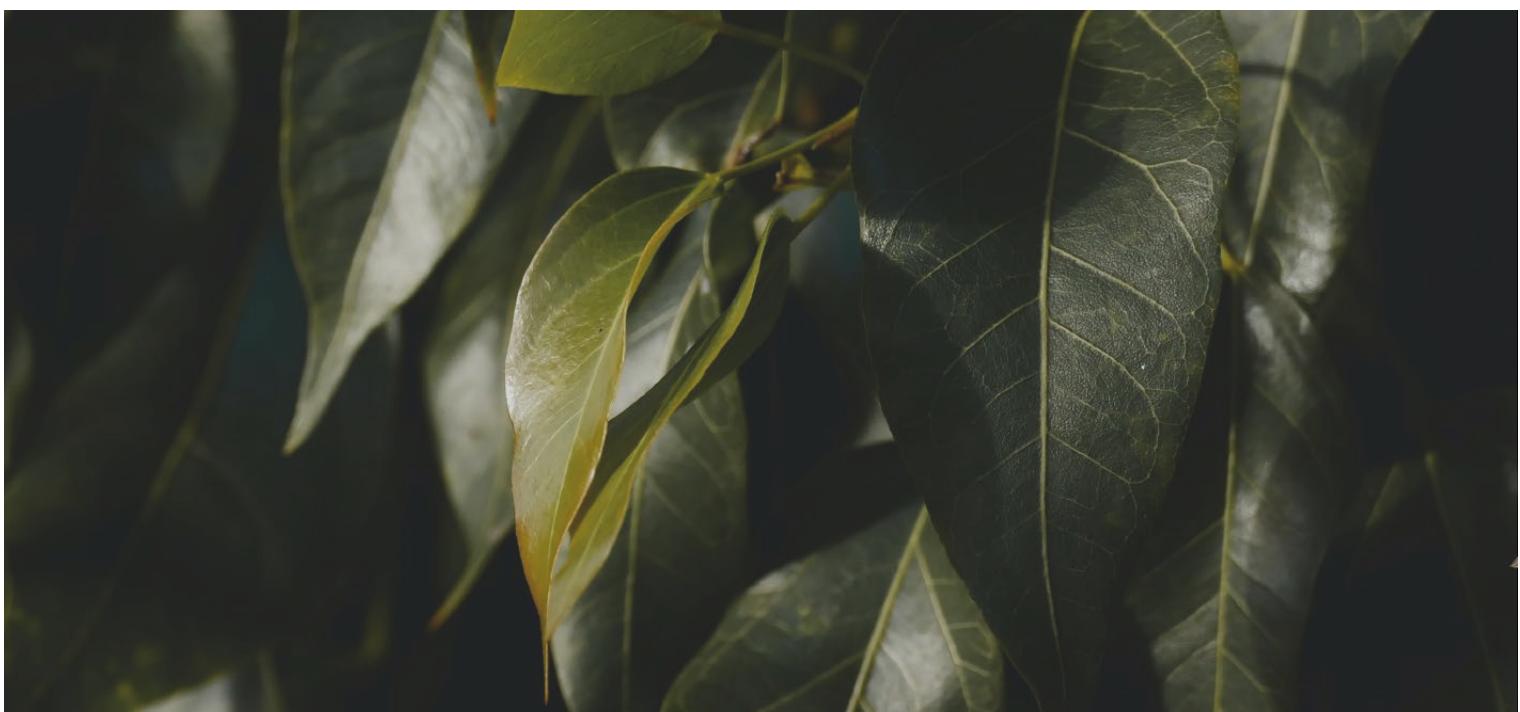
Currently, the markets are immature, lacking the institutional capacities and commonly accepted responsibilities of private and public institutions. Intergovernmental organizations and market players are driving the development of standardized frameworks, biodiversity metrics, and credits, but these are not widely applied yet. Methodologies for quality assurance and verified impacts are scattered in individual projects and schemes.

**The biodiversity markets are evolving fast. The following months and years determine the direction of the markets.**

Several initiatives to develop biodiversity markets and credits exist.

These include:

- The joint initiative for biodiversity credits by the UK and France will facilitate the development of biodiversity credits. The global roadmap will enable companies to invest in environmental projects contributing to richer biodiversity or restoring nature. The initiative will work towards the 2024 United Nations Biodiversity Conference (COP16), where biodiversity markets are on the agenda.
- The Global Environment Facility (GEF) paves the way for the biodiversity markets. GEF's Working Group outlines the key recommendations for governments, policy-makers, market institutions, and other actors to develop credit-based biodiversity markets.
- Taskforce on Nature Markets builds awareness of nature markets, develops communities of practice, encourages innovations, establishes a roadmap of recommendations for key actors, and highlights several exemplary pathfinder initiatives. It has produced a series of topical reports on the biodiversity market development.



- The Biodiversity Credit Alliance (BCA) is an alliance formed by scientists, academics, conservation practitioners, and standard setters, with direct links to Indigenous Peoples and Local Communities. Its mission is to bring clarity and guidance for formulating credible and scalable biodiversity credit markets. The BCA seeks to mobilize financial flows towards biodiversity markets and aims to develop measured credits for biodiversity. In autumn 2023, the alliance will publish reports and discussion papers about definitions, demand-side dynamics, and quality and integrity of the markets.
- The World Economic Forum released High-Level Biodiversity Credit Principles in December 2022. It is convening a frontrunner coalition of biodiversity credit buyers and will organize a pilot auction of biodiversity credits in 2024.
- Individual countries, such as Colombia, Australia, and New Zealand, are forerunners in developing the biodiversity markets.

The Science Based Targets Network (SBTN) is equipping companies with the guidance to set science-based targets for nature. Science-Based Targets is the most established global framework for corporate action for climate and nature. It enables setting, implementing, and tracking progress on science-based targets for freshwater, land, biodiversity, ocean, and climate. Biodiversity credits can potentially contribute to SBTN framework through the ‘Restore & Regenerate’ and ‘Transform’ parts of the framework’s mitigation hierarchy. Further guidance is to be published in 2024.

The Taskforce on Nature-related Financial Disclosures (TNFD) is working to create a framework for companies and financial institutions to manage and disclose their nature-related risks. TNFD published its final recommendations in September 2023. The recommendations inform

decision-making by companies and capital providers and contribute to a shift in global financial flows toward nature-positive outcomes and the goals of the Kunming-Montreal Global Biodiversity Framework.

## **Swedbank's purchase of biodiversity credits**

In 2023, Swedbank purchased 91 biodiversity credits from Orsa Besparingskog, a forest cooperative in Sweden, with an undisclosed price. The landmark purchase made the Swedish bank the first known buyer of European biodiversity credits. Swedbank is committed to a contract of 20 years' duration.

The project from which Swedbank bought the credits covers 13 hectares of forest. The Swedish University of Agricultural Sciences (SLU) created the methodologies for generating the credits with three project types: conservation of high natural value areas, restoration of biodiversity, and improved forest management.

The calculation of credits employs a formula consisting of biodiversity points, strategic value points and project type points. Field inventories of random sample plots form the backbone of the credit methodology. Biodiversity assessments involve the measurement and counting of species and specific structures of importance, such as dead wood, within the designated sample plots. The project will be self-evaluated annually, and will be subject to third-party verification every five years.

The nascent biodiversity markets have been criticized. Biodiversity units have been accused of reducing biodiversity into simplified metrics that neglect the many values nature has, including intrinsic value. Other critics say that developing credible metrics for biodiversity is impossible and that verifying the impact of biodiversity units would be too expensive.

There is a concern about greenwashing if the mitigation hierarchy is not strictly followed. According to the mitigation hierarchy, the priority is to avoid biodiversity losses. Then, the unavoidable losses should be minimized. And only as a last resort the remaining biodiversity losses could be offset.

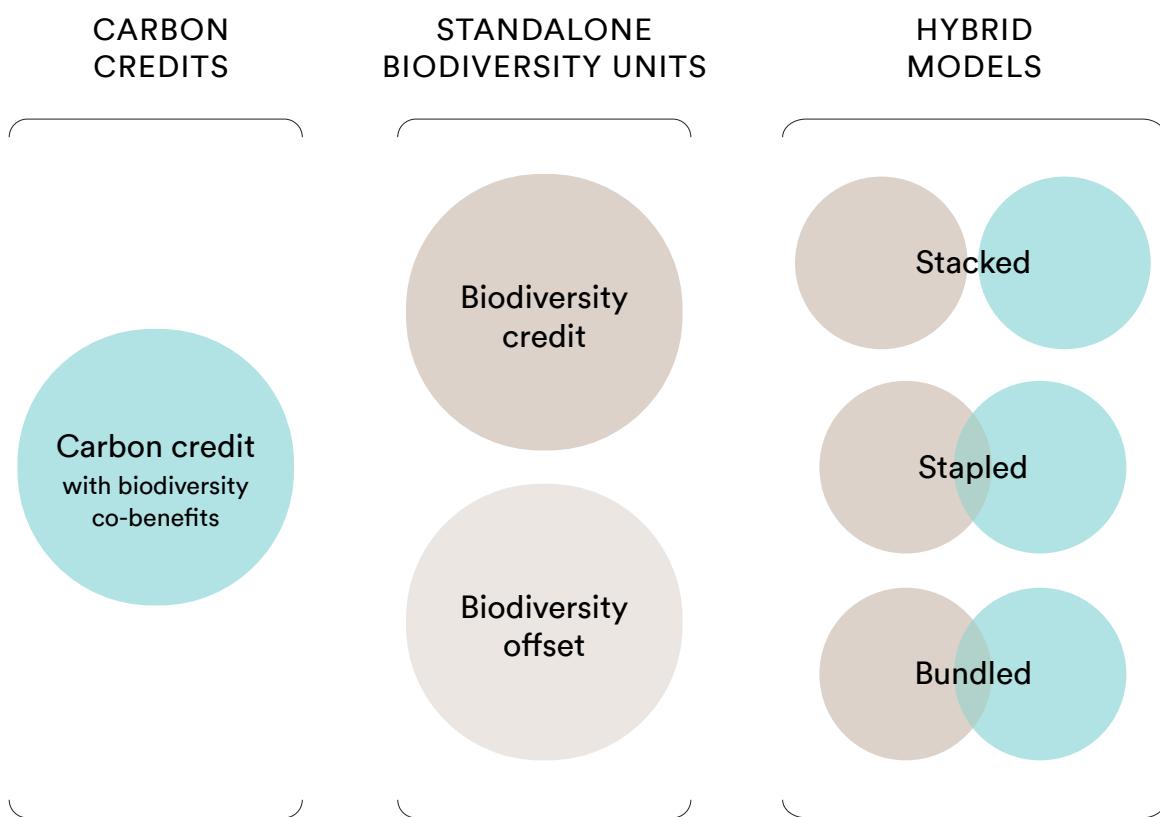
Many of the conservation projects do not add to global biodiversity but reduce the risk of losing it (for example, by protecting a forest). Only projects that restore or regenerate biodiversity can lead to net positive impacts on global biodiversity. When an immediate biodiversity loss caused by a construction project, for example, is compensated for by protecting a habitat in another location, the net impact on biodiversity is still negative.



# Unit-based market models

There are different models for unit-based biodiversity markets. A report prepared by Pollination for the New Zealand Ministry for the Environment divides credit-based market models into three categories based on different types of biodiversity units. While the markets may look different in the future, the report describes the most essential unit-based biodiversity market models existing today.

**Fig 1. Unit-based biodiversity market models**



## Carbon credits with biodiversity co-benefits

**Carbon credits with biodiversity co-benefits**, or **biodiversity-positive carbon credits**, are traded on the VCM. Biodiversity-positive carbon

credits' main 'product' is climate impact, but they also deliver added nature benefits. These carbon credits have an attribute describing the biodiversity impact of the project behind the credit. The biodiversity benefit can be quantified or unquantified. These credits are considered 'premium' carbon credits and are typically sold at a higher price in the VCM.

There is a stronger demand for carbon projects certifying biodiversity benefits. There are a number of additional standards targeting at certifying biodiversity benefits in particular.

**The Climate, Community and Biodiversity (CCB) Standards** is often used as a top-up of Verified Carbon Standard (VCS) projects. CCB represents assurance that carbon projects are delivering tangible climate, community, and biodiversity benefits. Currently, there are 349 million CCB-labeled carbon credits from 50+ projects across 48 countries.

**The Sustainable Development Verified Impact Standard (SD VISta)** is a standard for certifying the social, environmental and biodiversity benefits of carbon projects. Verra is responsible for managing, overseeing and developing the SD VISta Program. Currently, there are 29m+ SD VISta-labeled verified carbon units issued originating from 115 registered projects across 25 countries.

## **Standalone biodiversity units**

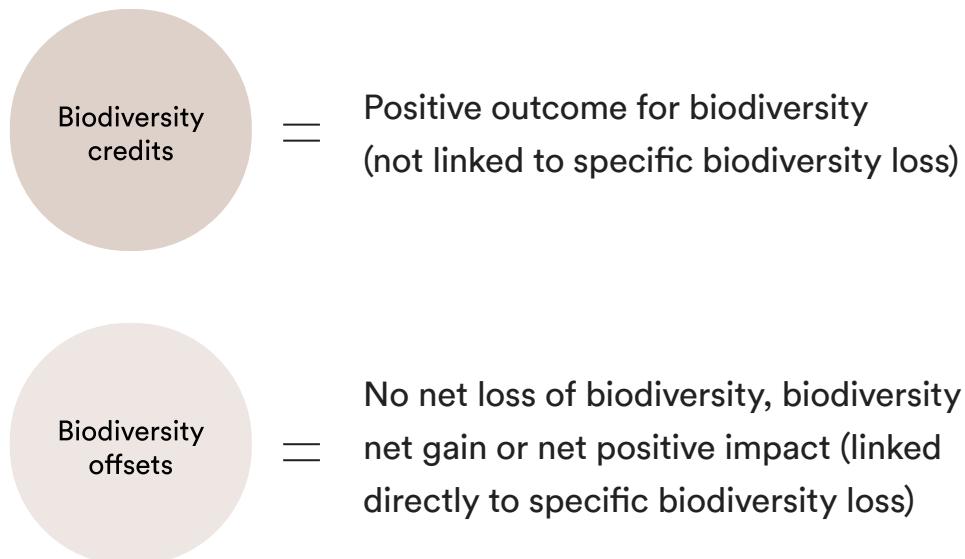
**Standalone biodiversity units** encompass two different approaches: biodiversity offsets and biodiversity credits.

**Biodiversity offsets** are based on the idea of counterbalancing the negative impacts on biodiversity in one location with purchasing biodiversity units that represent positive impacts in another similar location.

This type of ecological compensation is commonly regulated via national governments' legislation. Biodiversity offsets are not traded on international markets. Biodiversity offsets are used in development projects where a given habitat is lost due to land use change or a construction project. Similar or other valuable habitats are restored or protected through offsets to compensate for the impact of the project. Offsetting schemes typically demand the following mitigation hierarchy.

Offsetting, or ecological compensation, may be mandatory in building permit processes. In England's legislation, mandatory 10% Biodiversity Net Gain (BNG) will be required from building permits for new developments. National schemes can be voluntary, too. The Nature Conservation Act of Finland lays down provisions on the procedure for voluntary ecological compensation and the criteria for offsetting.

**Biodiversity credits** are similar to biodiversity offsets, but they are not linked with specific projects with negative nature impacts. They do not have the in-built principle of counterbalancing or compensating for the harm done. Instead, they are aimed to facilitate private investments in nature positive projects, without making an offset, or counterbalancing, claim.



**The developing markets for biodiversity credits are international, and therefore, very different from the national biodiversity offset schemes.**

The terminology around biodiversity credits is evolving. The terms **biodiversity certificates**, **nature credits**, **nature certificates**, **biodiversity tokens**, and **biocredits** have been used with similar and overlapping meanings.

Some actors and initiatives wish to make a distinction with carbon credits and prefer the term ‘biodiversity certificate.’ Others prefer the term ‘credit’ for precisely the opposite reason. Some consider ‘biodiversity’ too complex and like ‘nature’ instead.

In this white paper, we use the terms **biodiversity credits** and **biodiversity offsets** (two different concepts) to make comparisons to carbon credits in the VCM.



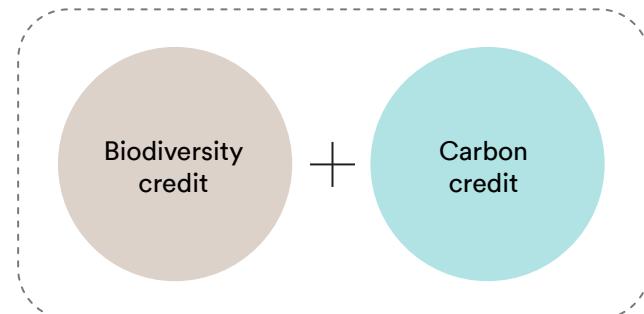
## Hybrid models

**Hybrid models** combine standalone carbon credits and biodiversity credits. The main approaches to do this are stacking, stapling, and bundling.

**Fig 2. Hybrid units combining carbon and biodiversity credits**

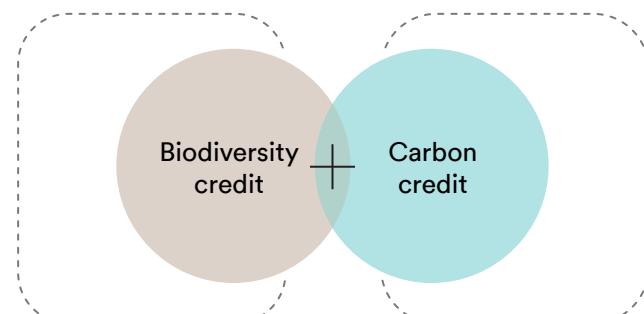
### Stacked

Separate units generated by the same project / land



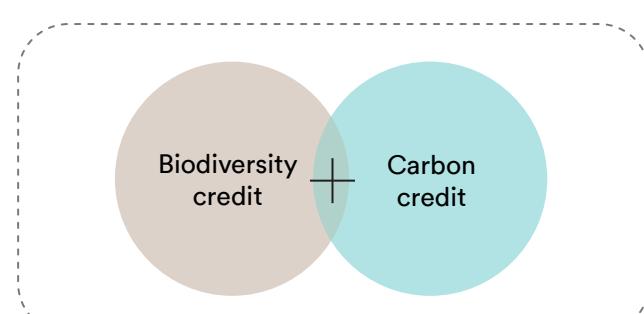
### Stapled

Combined unit generated by different projects / lands



### Bundled

Combined unit generated by the same project / land



In **stacking**, the biodiversity credits and carbon credits are generated on the same land or by the same project, resulting in certified carbon and biodiversity credits. These credits can be sold separately to different buyers.

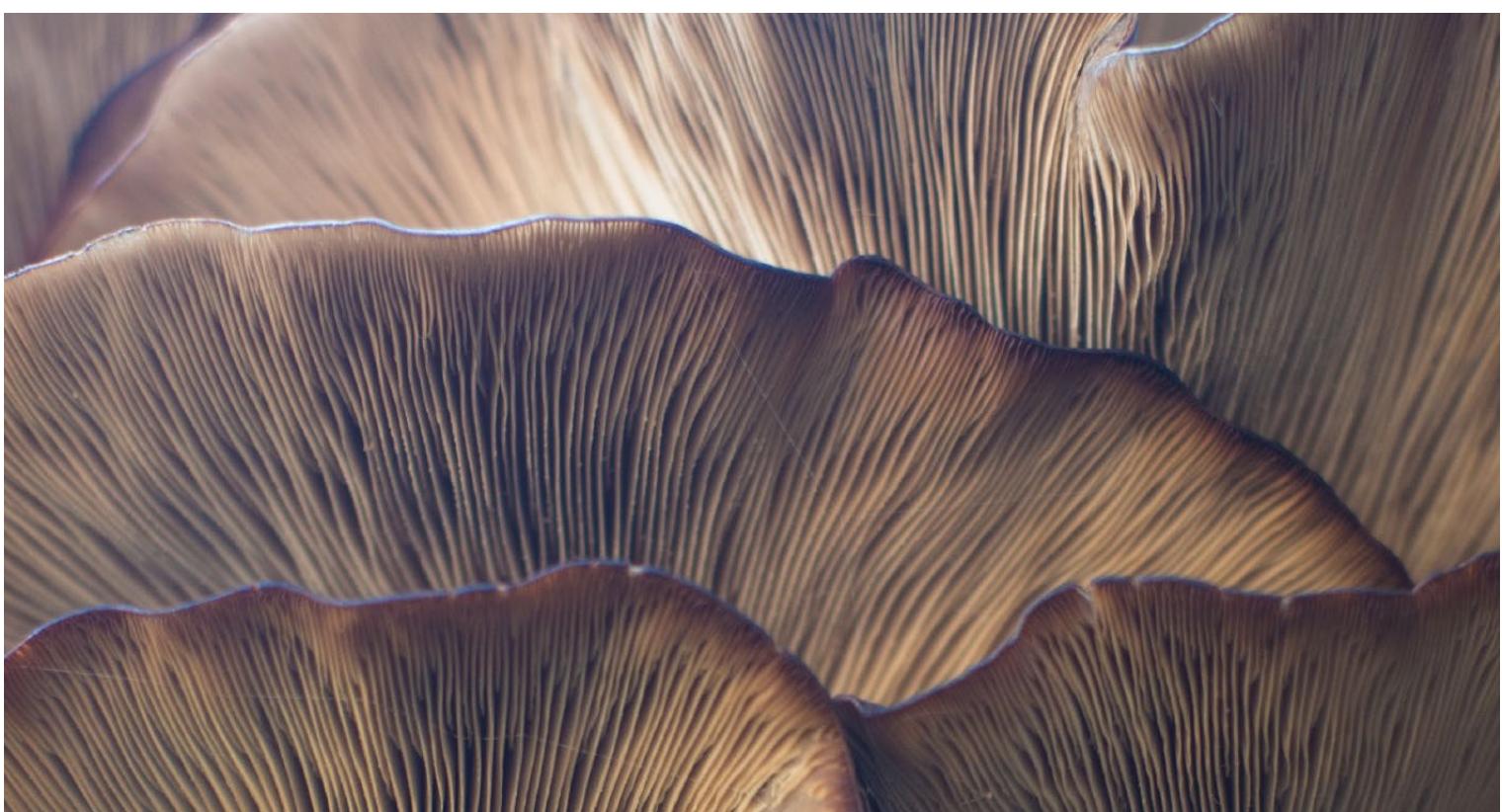
The parliament of France approved the ‘Green Industry’ bill, which aims to incentivize nature restoration and will enable the stacking of carbon and biodiversity credits, in July 2023.

In **stapling**, the separate carbon and biodiversity credits are sold together as a combined product. Here, the two credits may originate from different lands, projects, or even different types of projects. For example, the carbon credits may be derived from technological removals.

South Pole’s EcoAustralia credit is a stapled product, combining Gold Standard’s carbon credits and Australian Biodiversity Units.

In **bundling**, the carbon and biodiversity credits are generated on the same land or by the same project. These credits are tied together and sold as one product to a single credit buyer, unlike in stacking, where the units are separate.

The discussion about hybrid units will be one of the big debates in emerging markets, foresee some experts.



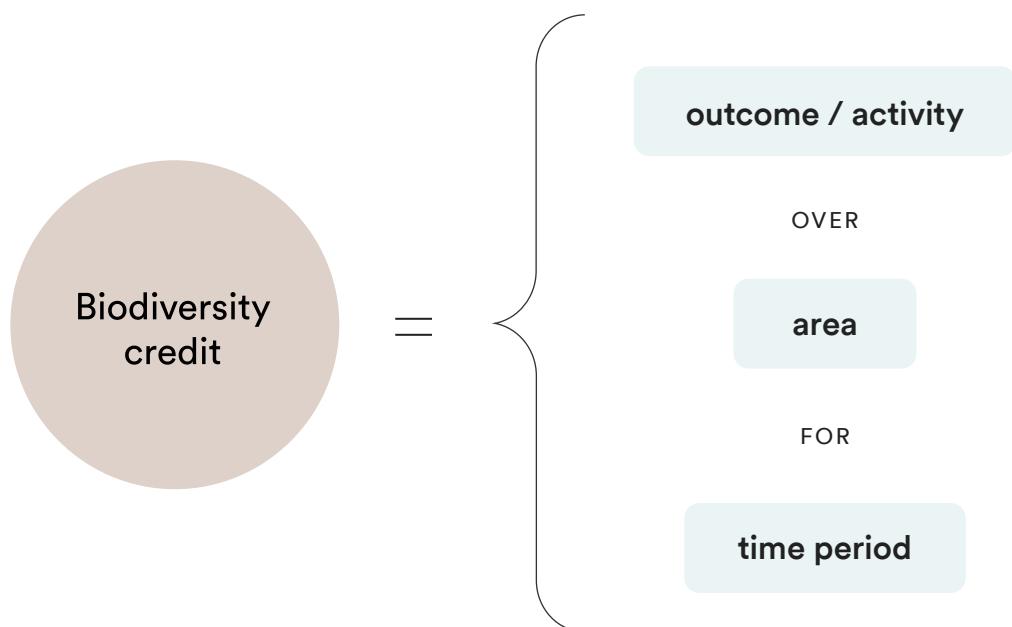
# Biodiversity credits

**Biodiversity credit** is an essential component of the international, voluntary biodiversity markets.

Biodiversity credit is a new mechanism that facilitates private funding for protecting nature. Biodiversity credits are a complementary tool to finance biodiversity projects and actions, in addition to traditional nature conservation and other financial instruments for preserving and restoring ecosystems.

A biodiversity credit represents the benefits of a project or action. A credit is a measurable, verified, and traceable unit that quantifies the benefits for biodiversity. The credits may represent biodiversity outcomes brought by the project or activities aimed to produce these outcomes.

Pollination's review of existing biodiversity credit schemes found the majority of the examined schemes adopt set area and time metrics for credit unitisation:



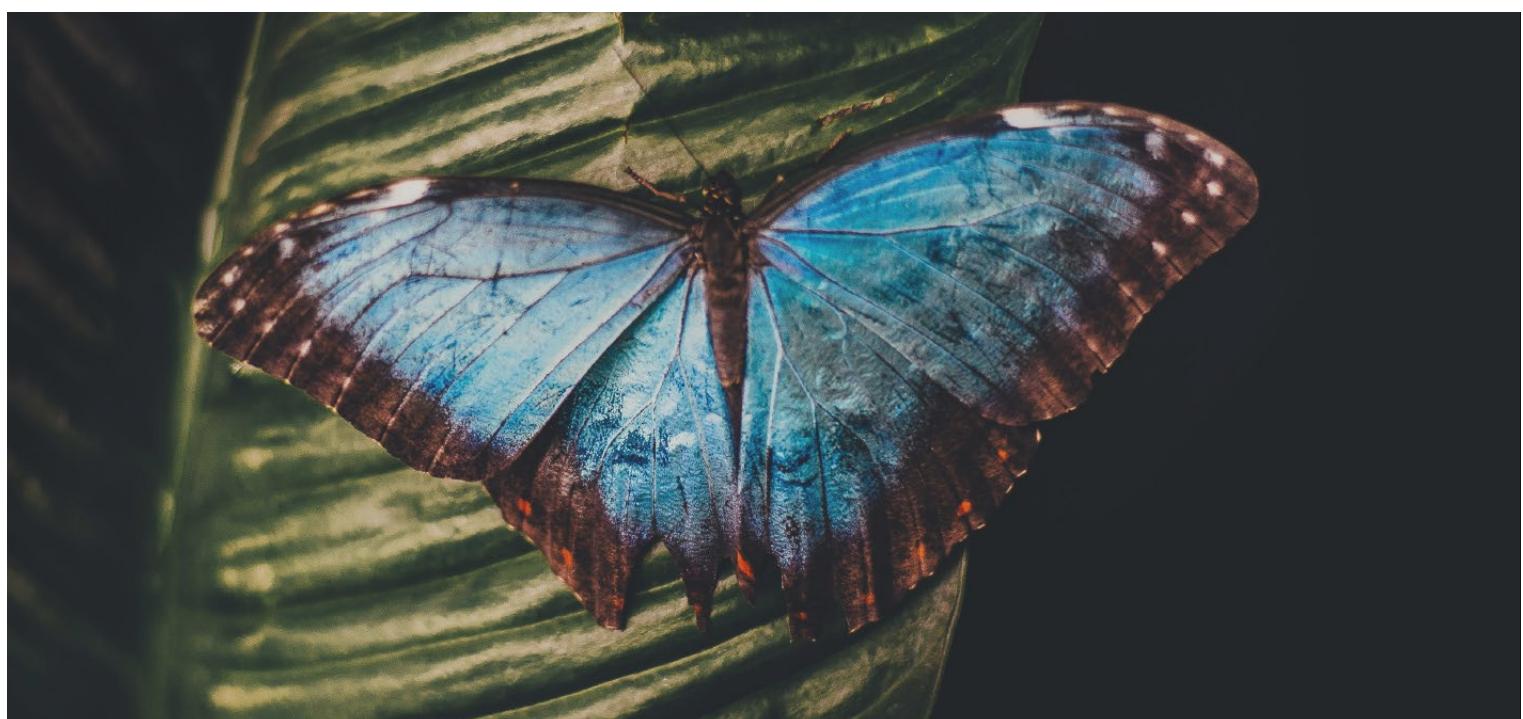
The idea of biodiversity credits is similar to what carbon credits represent in the VCM. By purchasing certified biodiversity credits, an organization can finance nature-positive projects.

**There is no universal metric or unit for biodiversity.  
This is a fundamental difference between the biodiversity markets and the VCM.**

For carbon, there is one agreed-upon global unit for measuring climate impact. Theoretically, one carbon credit represents one carbon dioxide equivalent (CO<sub>2</sub>e), equalling one tonne of CO<sub>2</sub> reductions or avoided emissions. How well the carbon credit represents one tonne of CO<sub>2</sub> in the VCM is being debated. Overcompensation methods are being developed to overcome the uncertainties with the equivalence.

**Biodiversity, by its very nature, is more complex and multidimensional than carbon.**

There are infinite interactions and interdependencies between species and populations in ecosystems. Building a metric for biodiversity requires normative decisions about what makes a particular land or ecosystem



valuable. So, it is not merely a question of verification of impacts but also an issue of defining the value of biodiversity.

Many questions arise. Is the number of species the defining factor? Or should it be the presence of endangered or threatened species? Or keystone species on which other species are dependent? Should the metric be based on species, populations, or habitat types? Can we compare different nature types in different regions? Is there a way to include cultural and spiritual values? And how can all of the above be weighed with each other?

**Building a single-value metric for diversity is an overwhelmingly difficult task. This has implications for the markets' very foundations, logic, and integrity.**

For this reason, some biodiversity credit methodologies quantify the actions that lead to positive biodiversity outcomes instead of the precise ecological impacts.

Currently, the development of biodiversity credits is fragmented, and most of the biodiversity crediting frameworks and methodologies are under development or in a pilot phase.

Carbon credit standards are currently developing their methodologies and frameworks for biodiversity credits, or biodiversity certificates.

These include:

- SD VISta Nature Framework and Biodiversity Methodology, by Verra, is a recent framework targeting biodiversity, which had an open call for pilot projects this summer and is undergoing a public consultation in September 2023. The framework will enable project developers to verify the biodiversity outcomes of their projects and issue tradable nature credits as standalone assets.

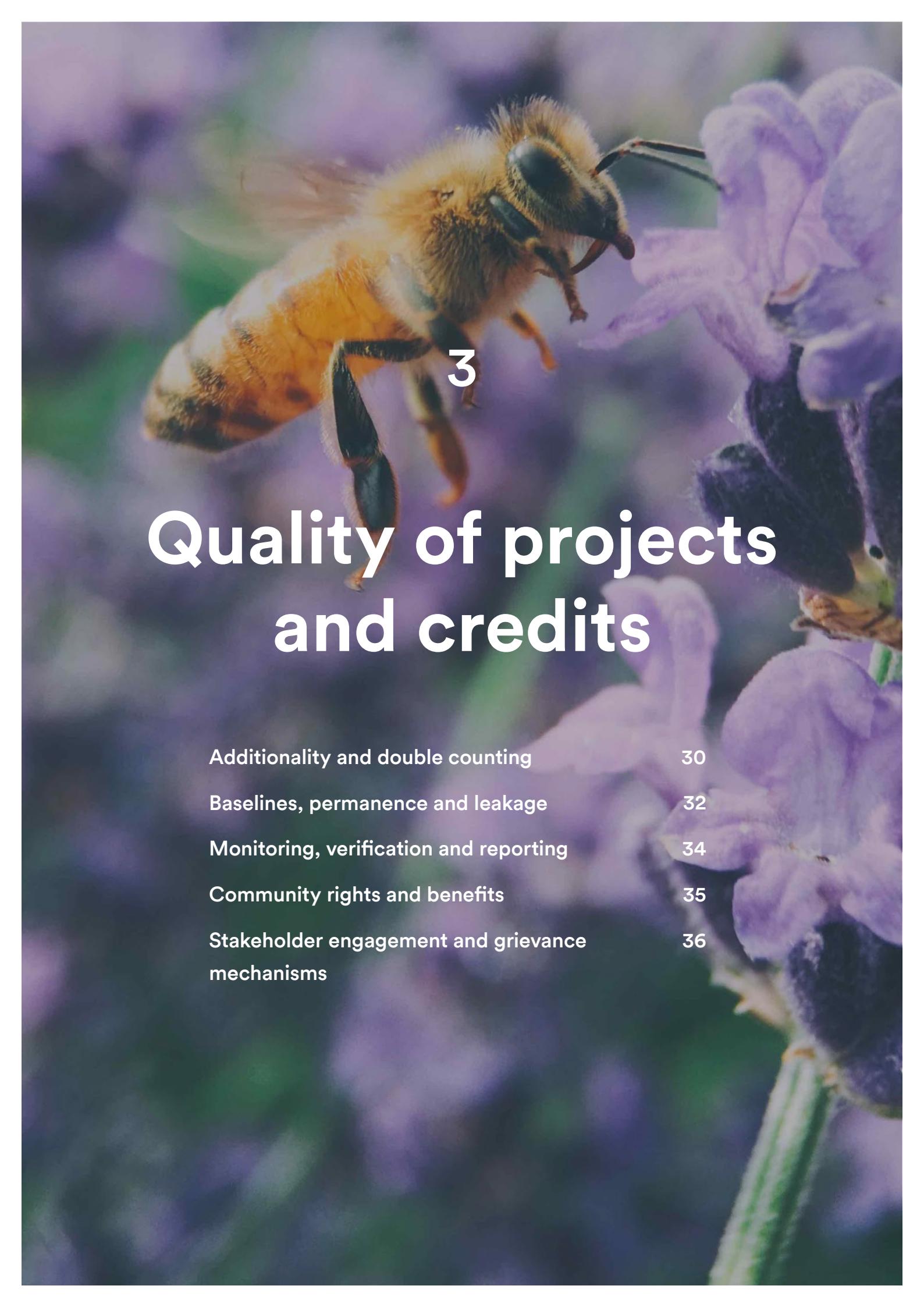
- Plan Vivo Biodiversity Certificates (PVBCs) are under development. The second public consultation of the methodology closed in September 2023. PVBCs will be issued only where there is evidence that species and habitats have benefited. Under PVBCs, projects must collect and report data on a number of broad species groups across a range of trophic levels.
- Gold Standard is collaborating with the Organization for Biodiversity Certificates (OBC) to create biodiversity certificates that prioritize the restoration and preservation of biodiversity. The methodology will be based on an environment's 'carrying capacity,' described with parameters that may include human activity and ecosystem characteristics.

## Pilots and experiments of trading biodiversity credits

The existing real-world examples of biodiversity credit purchases are small-scale or at the pilot stage.

- The Swedish bank Swedbank bought the first European biodiversity credits from the Swedish Orsa forest area: 91 credits over an area of 13 hectares at an undisclosed price.
- In New Zealand, a prototype biodiversity unit sale was conducted between a conservation group, Sanctuary Mountain Maungatautari, and Profile Group Limited in 2022. The biodiversity units will fund the conservation management of 83 hectares of land. The transaction was made possible by Ekos through its Sustainable Development Units Programme.
- In 2020, HSBC and the Queensland State Government purchased the world's first Reef Credits. This tradable unit quantifies and values the work undertaken to improve water quality flowing onto the Great Barrier Reef. One credit is equivalent to one kilogram of nitrogen, or 538 kilograms of sediment avoided from the ocean.
- In Ireland, the Woodland Nature Credit was developed for Coillte and Forestry Partners to plant native woodlands. The first tranche of the new product was announced with AXA Ireland financing the planting of 600,000 native trees through the purchase of credits worth two million euros.

The above-mentioned credit purchases and other case examples are summarized in the report 'Harnessing Biodiversity Credits for People and Planet,' published by NatureFinance, Carbone 4, and Global Environment Facility (GEF).



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# Quality of projects and credits

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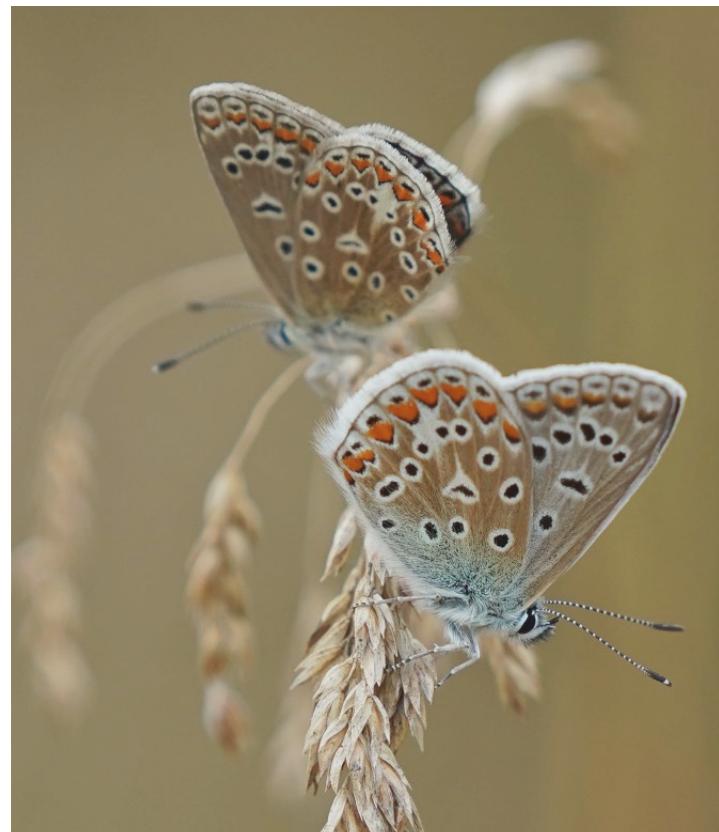
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## Quality of projects and credits

This section draws hands-on lessons from the VCM, focusing on the quality of nature-based projects and biodiversity credits.

### Additionality and double counting

**Additionality** is one of the most critical elements of any tradable unit for making climate or biodiversity claims. Additionality is evaluated by examining whether the carbon or biodiversity benefit would exist without the project's intervention. If the response is yes, the project is non-additional, lacking impact beyond the business-as-usual scenario.



**Financial additionality** signifies the project's inability to be self-sustaining without revenue from selling verified biodiversity units. If biodiversity protection activities are already happening as part of the work of local or international NGOs or are being enabled by international development help or state subsidies, for example, they are not additional. The activity would have happened even without registering it as a biodiversity project selling credits.

**Policy-level additionality** means that the project goes beyond the biodiversity policies in place. Thus, the project would not have happened as a result of the existing policies. As countries have set biodiversity targets, assessing policy additionality should be done against the country's biodiversity policies and targets, including those of the Kunming-Montreal Global Biodiversity Framework, agreed at the Convention on Biological Diversity (CBD) at COP15.

Avoiding **double claiming** assures that two different parties are not simultaneously claiming the same biodiversity outcome. The outcome or impact of a project, claimed by the credit buyer, should not be counted as the project host country's progress towards its national targets. Avoiding double claiming is especially important with offsets, which state that the harmful impact on nature is counterbalanced by purchasing biodiversity units.

In the VCM, one solution for double claiming is called "corresponding adjustment." It means the carbon credits sold in the VCM are reduced from the mitigation outcomes (emission reductions and carbon removals) that the country reports to the UN under the Paris Agreement.



**In the absence of universal metrics for biodiversity, applying ‘corresponding adjustments’ with biodiversity credits is likely to be very complicated.**

Another VCM response has been adopting non-offset claims, such as climate contributions and beyond-value chain mitigation, which do not aim to counterbalance the credit buyer's emissions.

Other forms of double counting, such as **double issuance or double selling**, can be avoided by tracking every transaction in a registry.

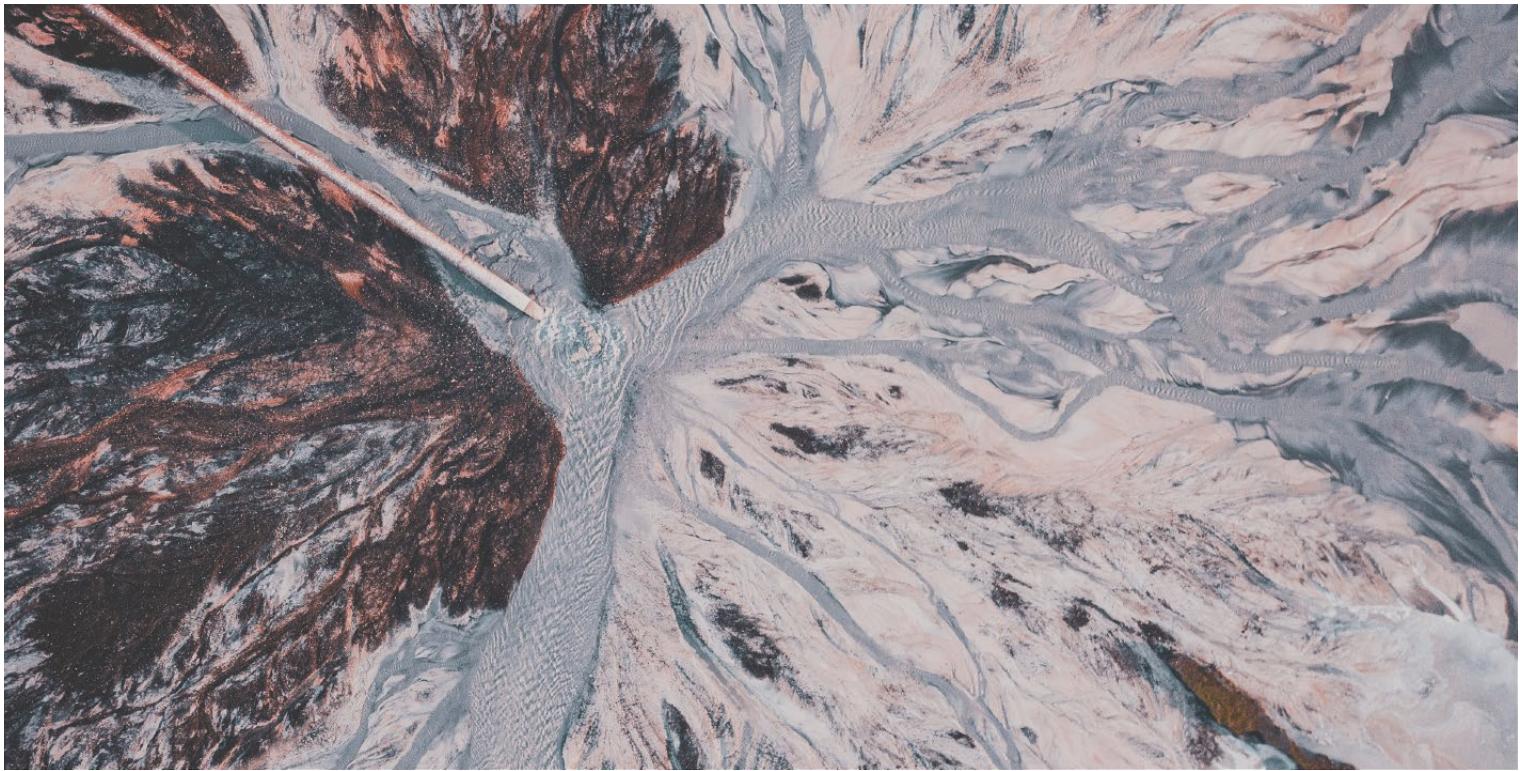
It is worth noting that additionality may become an issue with credit stacking. If the carbon credit and the biodiversity credit are generated on the same land or by the same project, the financial and political additionality of both credits, also concerning each other, should be clearly articulated.

## **Baselines, permanence and leakage**

Real impacts can only be evaluated against **robust baselines**. A credible business-as-usual baseline is a prerequisite for demonstrating a project's impact on biodiversity. It is a condition for establishing the biodiversity project and measuring the progress using commonly agreed-upon indicators.

**If the baseline setting overestimates the outcomes of the project or the threats in the business-as-usual scenario, the project results in overcrediting.**

From the VCM, we know risks are involved when project developers set their own baselines. The project developer has the financial incentive to maximize the amount of credits produced and, in this way, increase the



financial return on the project. A solution would be a baseline set by an independent third party using a scientifically sound methodology.

**Permanence** means that the positive outcomes and impacts of the biodiversity project are durable in the timeframe of decades or centuries. In the VCM, the long-term impacts of projects can be measured, for example, by using satellite data.

### **For biodiversity, the issue of permanence is more complicated because animal species migrate.**

Species migrate between regions and habitats as a normal part of their lifecycle. Human pressure, such as poaching, forestry, and converting natural habitats to agricultural land, forces species to move. Furthermore, climate change accelerates migration and displacement of species and populations.

**Leakage** refers to the situation where safeguarding biodiversity in the project area leads to losing biodiversity in another. This happens when harmful actions, such as poaching or slash-and-burn agriculture, are prevented in the project area, but these actions move and continue outside

the project area. The net result is that the project does not contribute to reducing the biodiversity loss but only pushes it to a new place.

### **Climate change poses another challenge to nature-based projects.**

Changing climate may lead to increased wildfires, droughts, floods, and new pests that destroy habitats in the project area. Furthermore, climate change causes indirect threats to the project area. Eroding agricultural lands outside the project area may increase the pressure to convert natural fertile project areas into croplands.

Buffer pools will be necessary in the biodiversity markets to cover possible reversals of lost biodiversity due to natural disasters and other threats.

## **Monitoring, verification and reporting**

In the VCM, biodiversity impacts are presented as attributes or added benefits of carbon credits. This can be justified to some extent, as the main ‘product’ is carbon, and biodiversity is considered a co-benefit, which is not priced separately.

For biodiversity markets, it will be critical to describe the impact on biodiversity in sufficient detail. This will require methodological development and agreement on the standardized monitoring and reporting methods across the markets.

Deciding on robust methods for monitoring, verifying, and reporting are prerequisites for credible markets. Field inventories, remote sensing, sound recording, eDNA methods, and their combinations are potential tools. The best knowledge by ecologists, forest scientists, and geospatial scientists should be used in selecting the right methods.

Some biodiversity credit methodologies and frameworks do not measure impacts on biodiversity but, instead, quantify the cost or the effort of biodiversity conservation and restoration actions.

### **Third-party involvement in monitoring, verifying, and reporting is necessary to ensure transparency.**

A lesson from the VCM is that the project developer's self-monitoring using custom maps often contradicts peer-reviewed deforestation maps and satellite images. Robust markets cannot rely solely on project developers' own data. Transparency and third-party auditing is the only way to ensure monitoring, validation, and reporting are on a solid base.

## **Community rights and benefits**

In the pursuit of credit-generating projects, landowners, including governments, may resort to limiting livelihoods of local communities, or in extreme cases, to forceful eviction of local residents from the project area. Such actions lead to human rights violations.

### **Biodiversity projects should take community rights at the core of the project.**

Often the regions described as the last strongholds of wildlife are also home to local communities dependent on the forest and other natural resources for subsistence.

Poverty and lack of land ownership often drive negative developments, such as uncontrolled slash-and-burn agriculture and poaching. Biodiversity projects should provide benefits and income to local communities, instead of excluding them from the only possible ways to make a living.



Community well-being is not only crucial from an ethical standpoint, but it also aids in curbing illegal activities like poaching if local communities support and endorse the project. High-integrity carbon projects yield tangible benefits for local communities, uplifting livelihoods.

The Compensate Foundation recommends biodiversity projects to take best practices from the carbon projects and generate measurable, additional benefits for socioeconomic community development. Local communities' rights to their own land and natural resources and biodiversity should be acknowledged, and the sharing of economic benefits from biodiversity credit projects should acknowledge these rights.

The role of indigenous peoples and local communities in the biodiversity markets is examined in the Biodiversity Credit Alliance's recent [discussion paper](#).

## **Stakeholder engagement and grievance mechanisms**

Projects of high integrity prioritize transparent and inclusive stakeholder consultation processes, where local communities provide their free, prior,

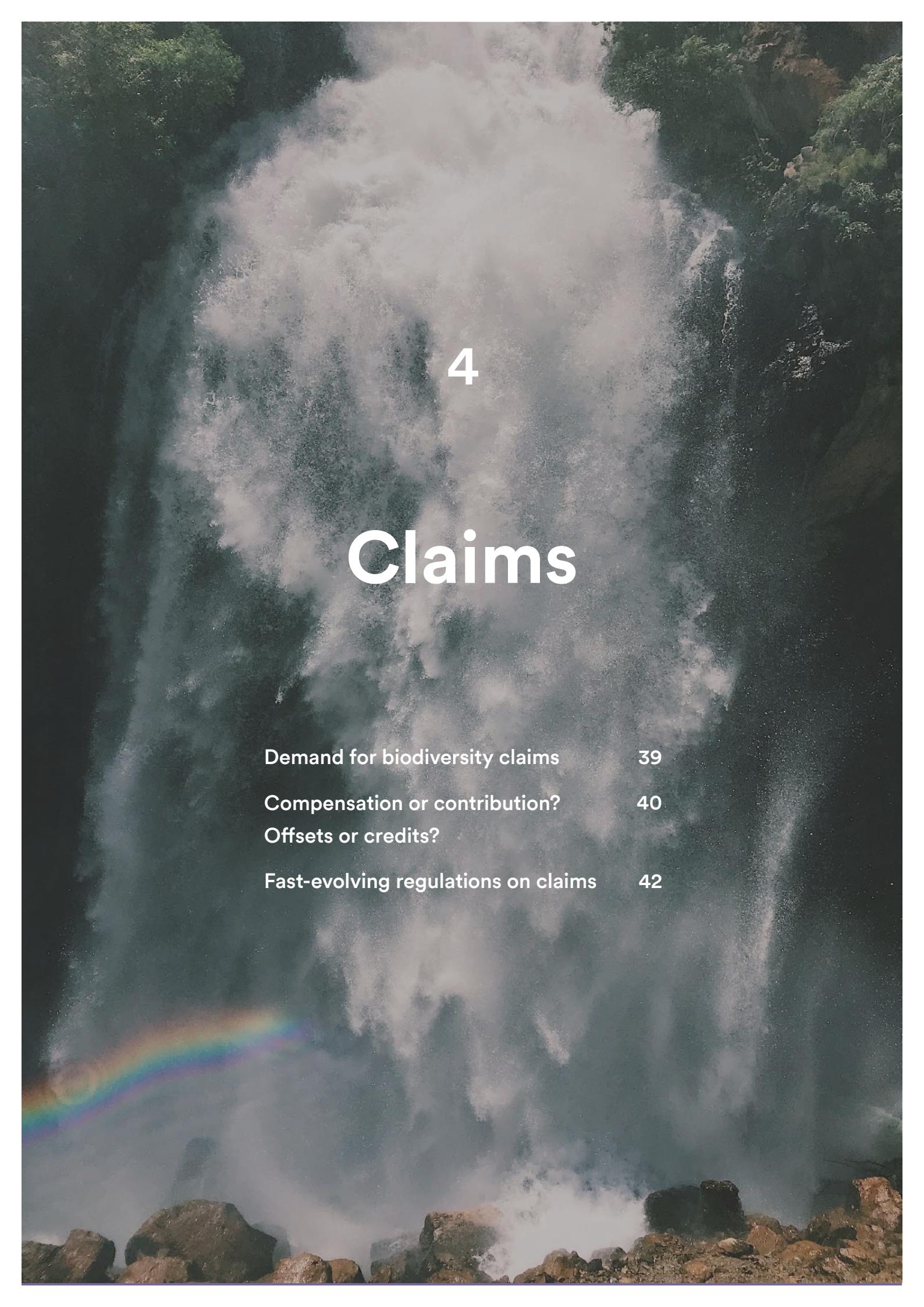
and informed consent and hold decision-making authority over sustainable development endeavors funded by the project.

Many projects are established in remote regions of the Global South, often marked by low literacy rates. Hence, ensuring all project plans are communicated in local languages and comprehensively explained to both directly and indirectly impacted local populations becomes paramount. Project activities should be disseminated through public media channels, inviting all stakeholders to participate and voice their opinions.

In cases necessitating locals' legal agreement, access to legal counsel should be provided, ensuring comprehension of the cooperation's nature and agreement to all clauses. Project concepts, documentation, and stakeholder consultations should also be accessible in local languages and paper format for those without internet access.

Sometimes projects may lead to conflicts, human rights infringements, or even so-called carbon colonialism. Robust grievance mechanisms guarantee local voices are acknowledged and appropriate actions are taken.

A review conducted on behalf of Carbon Market Watch found that only one voluntary carbon standard, Gold Standard, provides appropriate recourse to file grievances to communities affected by climate projects. We know from the VCM that there is a high risk of companies trying to secure deals on protected and disputed public lands, including indigenous territories, prompting concerns about 'green land grabs.'



# 4

# Claims

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# 4

## Claims

This section draws lessons from the VCM, focusing on claims, a crucial aspect of the nascent biodiversity market.

### Demand for biodiversity claims

An important motivation for a company to invest in biodiversity credits is the wish to communicate this contribution to consumers, shareholders, investors and other stakeholders.

In the VCM, offset claims, including carbon neutrality and net zero, are mainstream topics in the corporate responsibility field. Beyond value chain mitigation (BVCM) and other non-offset claims are becoming more popular, and new guidance for employing them is becoming available.

The Voluntary Carbon Markets Integrity Initiative (VCMI) published the Claims Code of Practice, a global integrity benchmark for climate claims. For the claim to be VCMI-approved, the organization should have science-based emission reduction targets, with ambitious interim and long-term milestones. The first approved claims will be public before the end of 2023.



## **Established frameworks for biodiversity claims have yet to be created.**

It will be a true challenge for the biodiversity markets to come up with claims that would capture the complex nature of biodiversity but would still be simple and attractive to consumers, investors, and stakeholders.

The Compensate Foundation believes it is crucial to develop claims in parallel with the biodiversity metrics and credits. No matter how accurate the developed biodiversity metrics are, they will not be used if the claims fail to incentivise corporate action.

## **Compensation or contribution? Offsets or credits?**

The overall trend in climate claims seems to be away from carbon neutrality, and towards science-based emission reductions, accompanied with beyond value chain mitigation (BVCM) and climate contributions.

In September 2023, the EU Parliament and Council reached a provisional agreement to ban carbon neutrality claims based on carbon offsetting, as part of the Directive on Empowering Consumers for the Green Transition. The implications of the new rules remain to be seen, but they demonstrate a shift away from the offsetting paradigm.

Also, the VCMI's Claims Code of Practice marks a paradigm shift from carbon neutrality claims towards new claims that are founded on science-based emission reduction targets and contributions to global climate benefits.

**In the biodiversity markets, counterbalancing claims should be limited to national or local biodiversity offset schemes.**

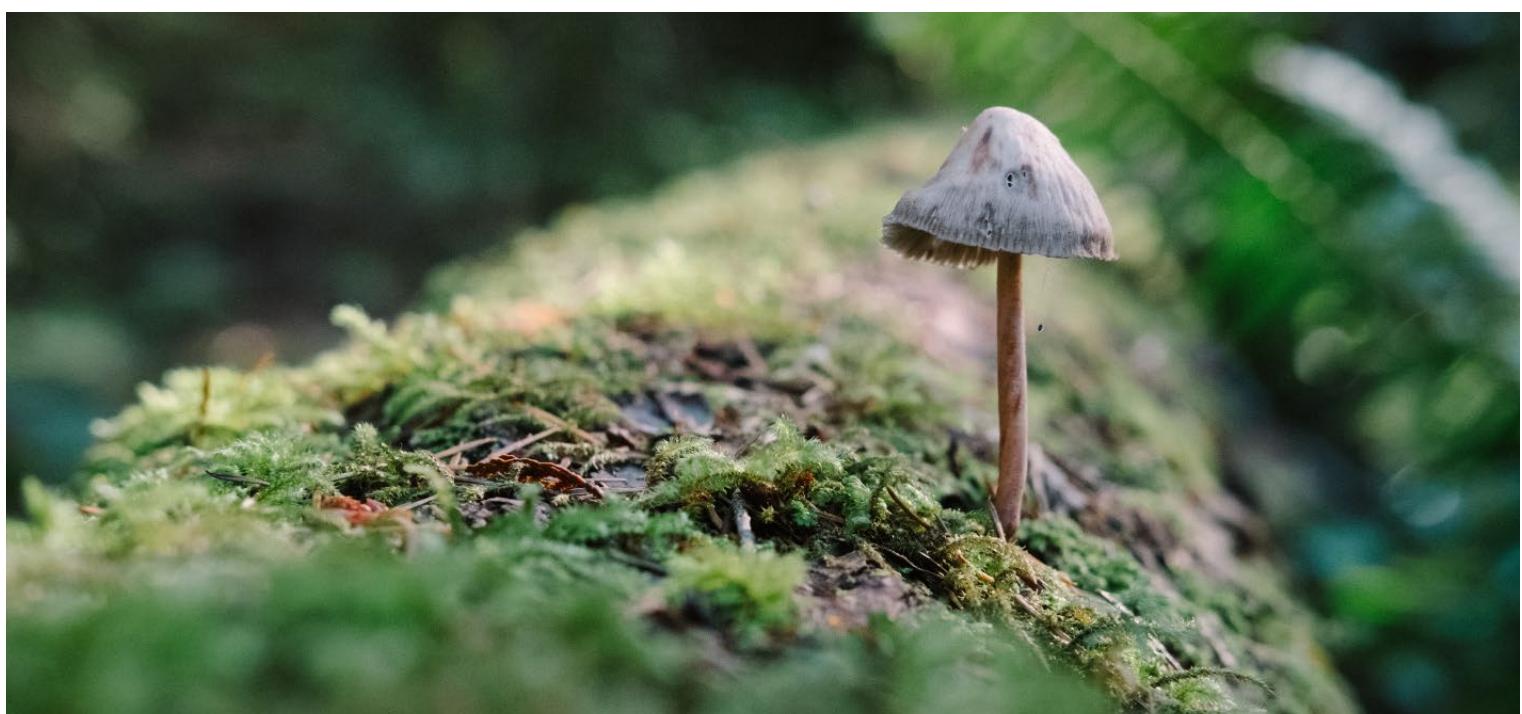
The mitigation hierarchy should be strictly followed in biodiversity offsetting, meaning that offsetting should never replace avoiding or mitigating biodiversity loss. The locality of biodiversity loss and gains produced by the offset should be carefully addressed using the best scientific knowledge.

**The contribution claims are the only feasible option for international biodiversity markets and biodiversity credits.**

In the international biodiversity markets, employing credible counterbalancing claims is unrealistic. There is no globally agreed metric to describe an organization's precise impact on biodiversity or the equivalent biodiversity gain produced by a project. Even if there was such a metric, monitoring and verifying the impacts of the credit-sourcing projects would be highly costly.

**Contribution claims can incentivize corporate action at the national and local scales.**

The market should allow companies to make contributions beyond their value chain. For example, a software company might want to support



forest conservation without making an offset claim. Contribution claims provide means for that, and it may become a powerful tool in channeling funding to biodiversity preservation and restoration.

**Offset and contribution claims are different approaches with different logic, and the distinction should be clear to consumers and other stakeholders.**

## Fast-evolving regulations on claims

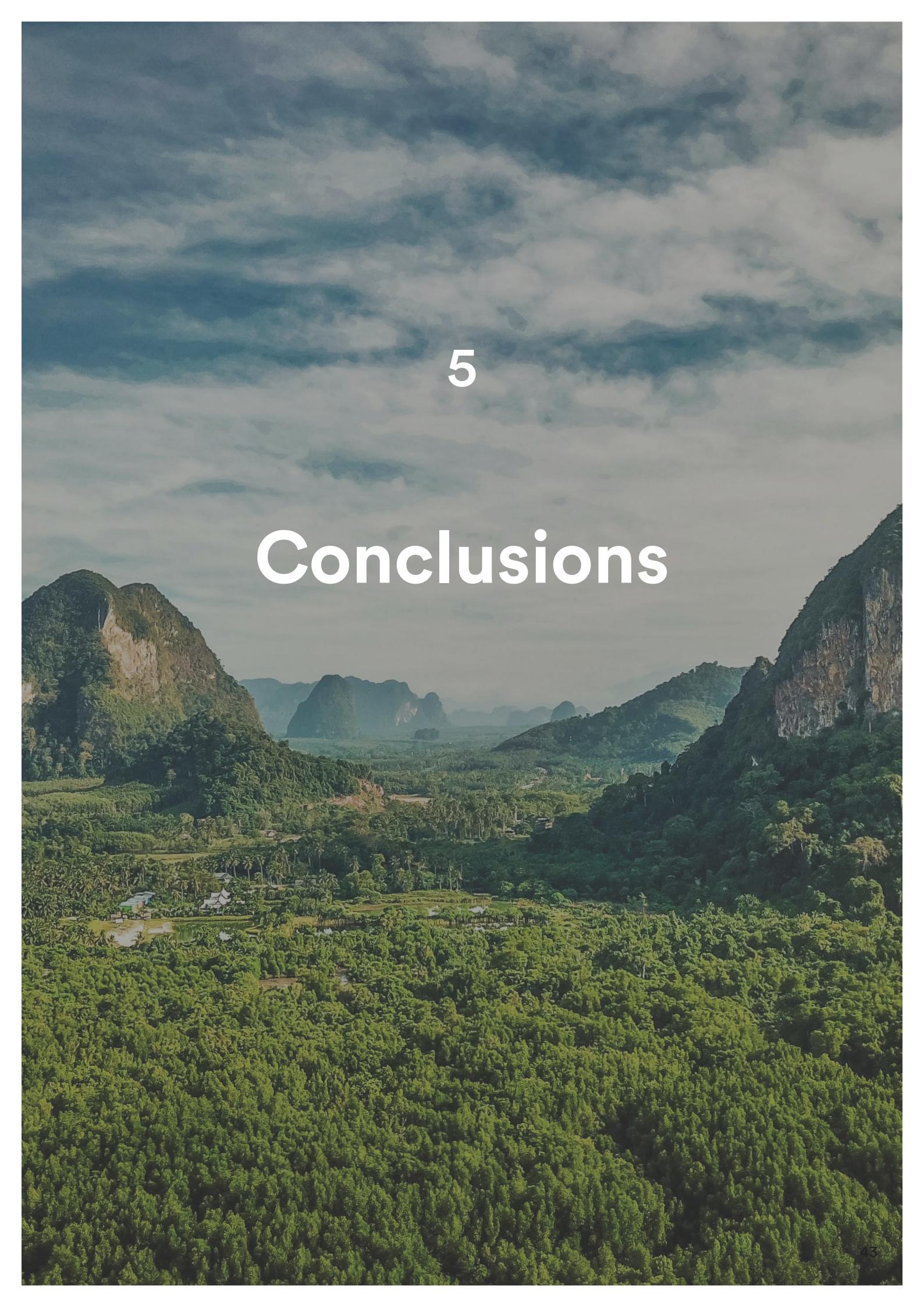
The regulation landscape on environmental claims is fragmented and constantly changing, making it very difficult terrain for companies to navigate in.

In the EU, the upcoming legislation will require strict transparency and accountability from environmental claims. The proposal for the Green Claims Directive mandates that companies validate their environmental claims and provide the necessary evidence to substantiate them. The Directive on Empowering Consumers for the Green Transition aims to prevent greenwashing by banning practices that mislead consumers about the true sustainability of products.

**The biodiversity claims must be clear about whether they are based on biodiversity offsets, biodiversity credits, or other types of actions.**

The claims should align with the significant corporate nature frameworks, such as the SBTN's science-based targets and the TNFD's recommendations, to create corporate interest.

The credit buyers need clear guidance in relation to the claims, to ensure they are not subject to later accusations of greenwashing. This type of guidance is not available to the potential credits' buyers yet.

The background of the slide is a wide-angle photograph of a lush, green landscape. In the foreground, there's a dense forest of tall trees. A valley opens up in the middle ground, containing several small, white buildings and patches of cultivated land. The background features several large, rugged mountains with rocky peaks and some green vegetation. The sky above is filled with thick, white and grey clouds.

5

# Conclusions

# 5

## Conclusions

The emerging biodiversity markets can provide an additional tool for channeling much-needed private funding to nature conservation and restoration.

Private and public initiatives are paving the way for rapid development of the markets. The urgency is driven by a genuine interest to protect biodiversity and generate income for nature conservation, but also by commercial interests.

Much of the discussion about biodiversity markets revolves around developing credible biodiversity credits. This is understandable, as the units and metrics have far-reaching consequences for the whole market. However, the discussion about metrics can easily hide other crucial aspects.

**Regardless of the credits and units chosen, many other quality issues of nature-based projects must be solved to deliver genuine impact.**

These include baselines, additionality, permanence, leakage, and double counting – all very familiar from the VCM. Even sophisticated biodiversity metrics provide little value if the project fails in the essential quality criteria.

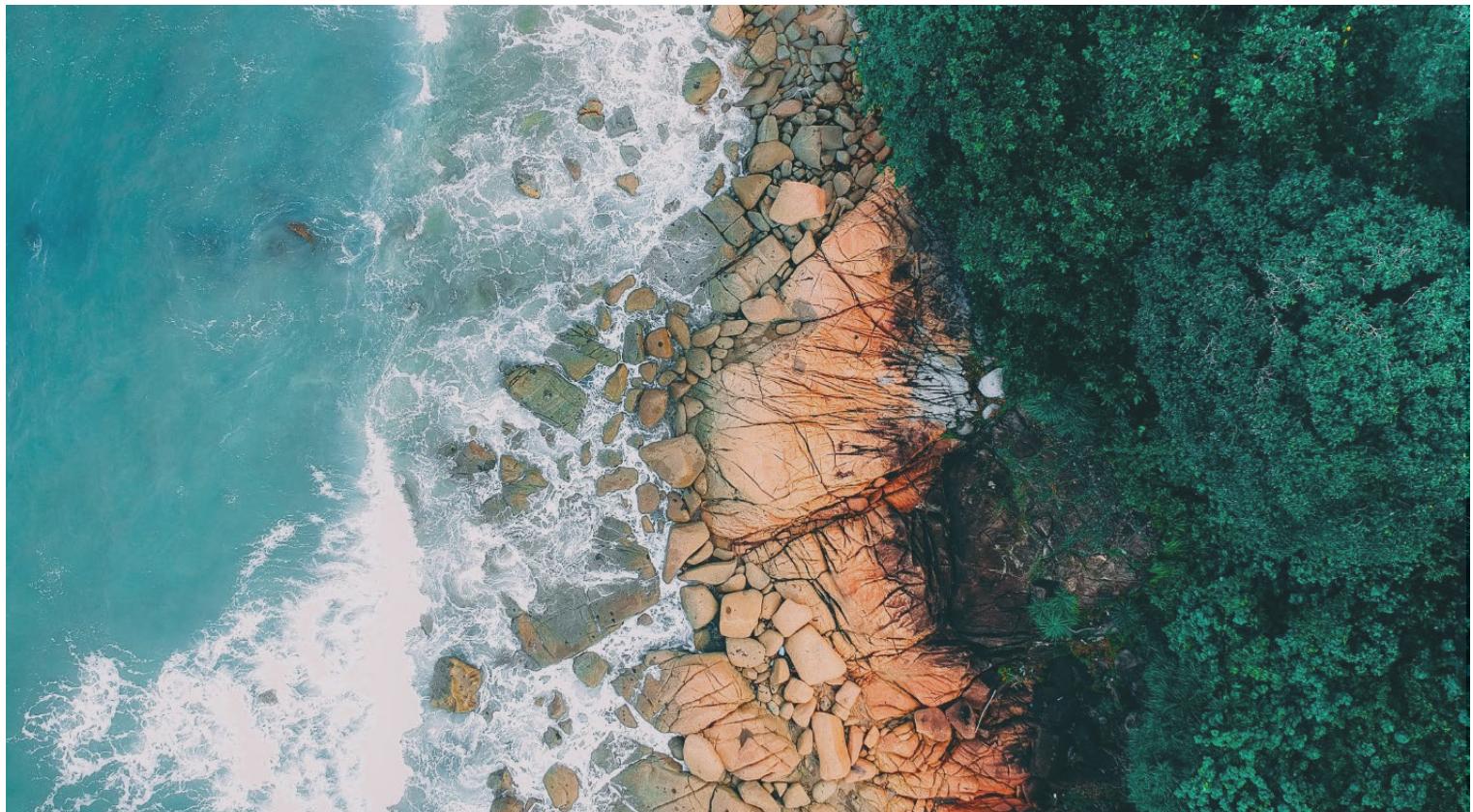


## **The biodiversity markets need corporate claims that accelerate corporate action.**

So far, there has been relatively little discussion about the biodiversity claims. Simple and appealing claims inspire action. This will be a big challenge with a topic as complex as biodiversity. The lack of attractive and easily communicated claims may become a significant barrier to market upscaling.

At this stage of the markets' development, the priority should be creating necessary institutions, quality assurance mechanisms, and arrangements that guarantee transparency. Building a solid base for integrity and transparency should be done without delay before scaling up the supply and demand.

If the governance lags, we face the risk of mainstreamed harmful practices and lack of transparency – the issues the VCM is currently struggling with. It is very difficult to reverse fundamental flaws afterward.



## **We know from the VCM that it is easy to lose trust and very difficult to regain it.**

Letting the markets flood with cheap biodiversity credits of questionable impact would undermine the trust in the market and be counterproductive for nature. The proliferation of misleading claims and greenwashing would have the same undesired effect, damaging projects of high quality, too.

The success of the emerging biodiversity markets will depend on whether they can introduce credible credits and robust yet appealing claims for biodiversity preservation and restoration. At the moment, these critical issues are unresolved.

The background of the image is a dense, misty forest. In the lower right foreground, a large, dark green fern frond with many smaller leaflets is visible, its stem reaching upwards. To the right of the fern, several tall, thin stems with coiled, brownish-purple new frond growths (fiddleheads) are emerging from the ground. The overall atmosphere is hazy and lush.

6

# Further reading

# Sources and further reading

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