



Protocol for Issuing Voluntary Biodiversity Credits

Executive Summary

Motivation

The evidence is unequivocal, we are living through the dual crises of biodiversity loss and climate change driven by the unsustainable use of our planet's resources. The risk of species extinction is increasing while wildlife populations are declining at an unprecedented rate¹. According to Inger Andersen², "biodiversity loss is already costing the global economy 10% of its output each year. If we fail to finance nature-based solutions, we will affect countries' abilities to make progress in other vital areas such as education, health and employment. If we do not protect biodiversity now, we will not be able to achieve sustainable development." In fact, the Global Biodiversity Framework signed in Montreal (December 2022) was clear on the need of sharp and innovative financial instruments to **mobilize at least US\$200 billion annually from public and private sources** to finance the implementation of biodiversity-related plans and strategies.

Introduction

This Protocol is designed for eligible biodiversity conservation projects to register, quantify, and issue Voluntary Biodiversity Credits (VBC). These credits may be acquired by both individuals and companies that want to make a positive and effective contribution to the conservation of threatened ecosystems and biodiversity. The **Protocol seeks to establish a roadmap to generate projects that ensure quantifiable gains in terms of biodiversity**, as well as the **financial and legal assurances required to ensure sustainability and permanence**.

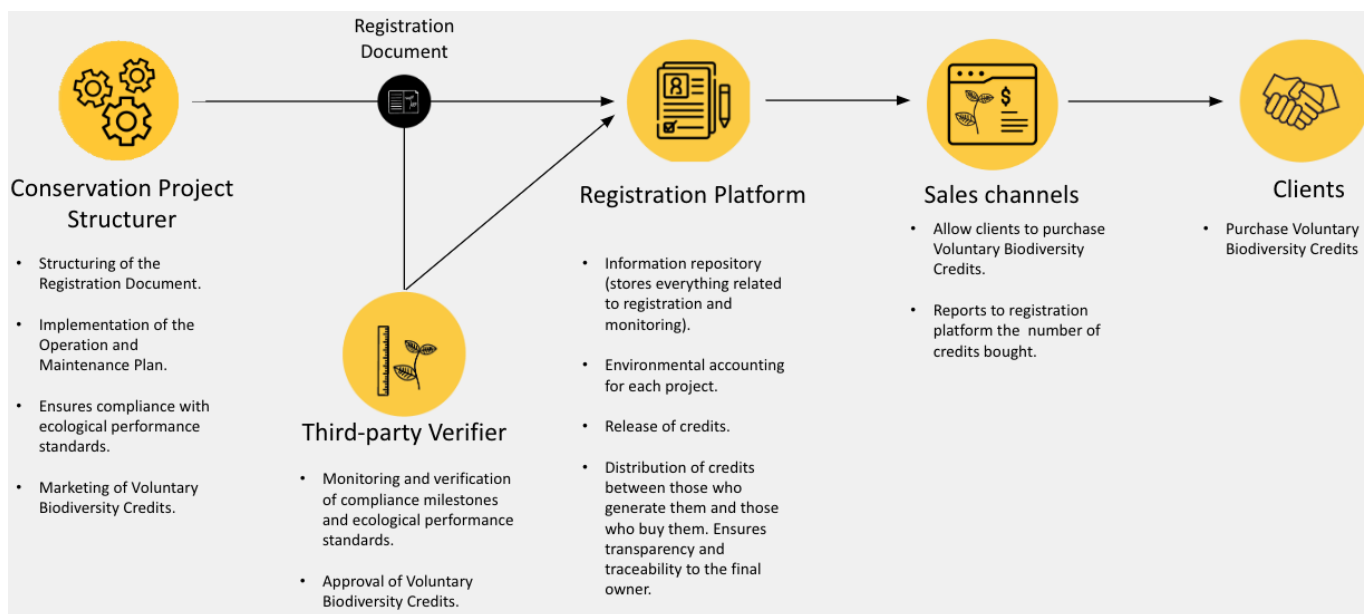
Principles

For a biodiversity conservation project to be able to issue VBC, it must ensure that in its structure and operation, as well as in the issuance, marketing and monitoring of the credits, it operates under the principles on the diagram at the right.



Lean Value Chain

The protocol describes the guiding principles for conservation projects that may be eligible for the generation of VBC. It has a reduced value chain that ensures transparency and rigor, while minimizing transaction costs. This document is a guide for different stakeholders as follows:



¹ Living Planet Report 2022.

² UNEP Executive Director

Eligible projects

Biodiversity conservation projects that adhere to this Protocol must demonstrate quantifiable gains in biodiversity by bringing a given landscape from a state of lower to higher biodiversity. The eligible projects would also need to demonstrate additionality and to carry out conservation actions in terms of:

Preservation actions: Actions or activities to protect and maintain the natural state of biodiversity (MADS, 2012).

Restoration actions: Ecological restoration is a complex process which transcends the traditional concept of "changing a modified cover to a state similar to the original". In principle, ecological restoration requires the interplay of many environmental, social, legal and economic aspects (SER, 2019).

What is a Voluntary Biodiversity Credit?

It is a **transactional unit that represents approximately 10m² of a preserved and/or restored ecosystem** that is technically, financially, and legally managed by the project developer to achieve quantifiable results in terms of biodiversity for at least 20 years. Quality and functionality are criteria to be considered besides the area in order to issue the credits. Hence, projects that positively impact threatened habitats, serve as stepping stones to facilitate movement and species dynamics as well as support ecosystem services, will be able to issue more credits than those seeking to simply conserve habitat that is not under threat. Credits can only be sold as ecological and management milestones are met.

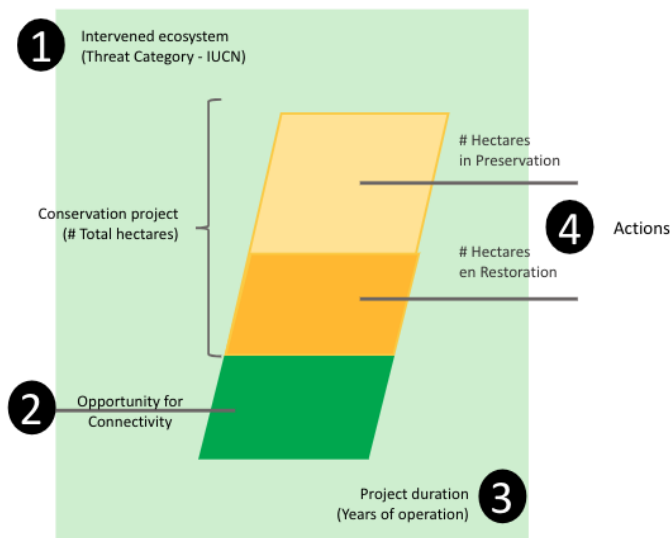
How to determine the number of Credits a project can issue?

The Protocol **proposes ecosystems as proxies for biodiversity**, because they represent a large-scale approach that allows us to identify important biodiversity assemblages that require protection.

The Protocol establishes a methodology to determine the number of credits to be issued based on 4 differential factors: ecosystem threat and area in hectares, connectivity, preservation and restoration actions, and the duration of the project.

This **methodology seeks to differentiate conservation projects according to their technical characteristics and value them based on the intervened ecosystem conservation status, as well as the relationship between preservation and restoration activities to be carried out**. The more threatened the ecosystem, the greater the number of credits that the project will be able to issue.

Any project that intends to incorporate VBC needs to calculate the 4 differentiating factors, and based on the Protocol's scoring system and Formula³, obtain the number of potential credits a given Project can issue.



$$\# \text{ Potential VBC} = \frac{\overset{1}{\text{TPA}} * (\overset{2}{\text{F1}} + \overset{3}{\text{F2}} + \overset{3}{\text{F3}}) + \overset{4}{\text{ARes}} * \overset{4}{\text{F4}} + \overset{4}{\text{APres}} * \overset{4}{\text{F4}}}{10}$$

TPA: total project area in square meters (m²)

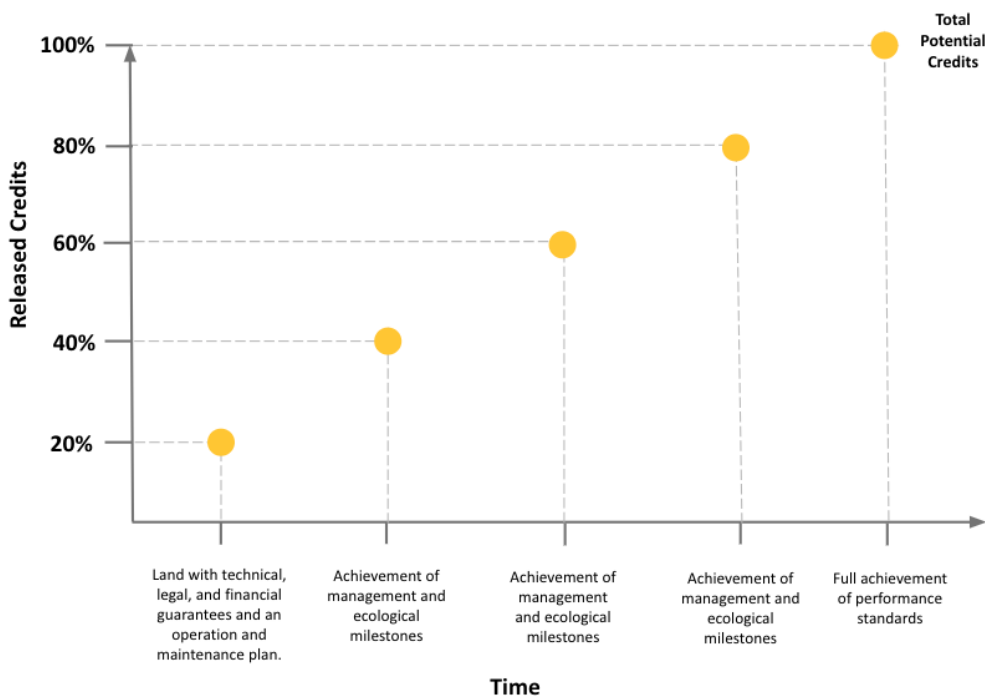
ARes: total area dedicated to restoration activities

APres: total area dedicated to preservation activities

³ For more details download the full version of protocol here:

<https://terrasos-1.hubspotpagebuilder.com/protocol-for-the-issuance-of-voluntary-biodiversity-credits>

Credit release schedule and performance-based payment



The Protocol determines a release schedule for the VBC based on management and performance milestones. Credits can only be sold once they are released. When purchased, they are subtracted from the whole credit batch. The first 20% is released upon registration and approval of the project by the auditor. The next release points take place as management and ecological milestones are reached.

A third-party verifier will be necessary to approve the achievement of such milestones, which will result in the release of credits that can be sold and marketed.

Management milestones: enables biodiversity conservation or ensures its sustainability. For example, land acquisition, limitation of land use, funding of an account for long term maintenance, enclosure or initiation of planting process, among others.

Ecological milestones: replace artificialized and degraded cover with natural cover, strengthen ecological connections between forest patches, increase habitat for fauna species, and protect and recover the structure and physico-chemical composition of soil. For example, an improvement on a biodiversity index or in vegetation structure.

Registration platform

To ensure transparency and traceability of the obtained results, and to generate trust in potential clients and stakeholders, the Protocol proposes the implementation of a registration platform that assures:

- Timeliness and availability of information
- Confidentiality of information
- Information traceability
- Service level agreements and terms and conditions

This registration platform must also have: the project flow, automatic transactions and self management, the serialization of units, accounting module, report generation, customer knowledge process, allow for different types of users and roles, clear security standards and protocols, and information exchange.

Third-party verifier

The Protocol is based on the fact that project developers must ensure an audit by informed and impartial third parties. This step is fundamental to determine if their conservation project could both verify its compliance with the proposed milestones and ecological performance standards, and be registered on the selected platform, in order to approve the release and commercialization of VBC. Third-party verifiers must evaluate the registration document, develop independent and objective monitoring and approve the VBC release. Verifiers must operate under the principles of:

1. Independence
2. Integrity
3. Fair presentation
4. Due professional care
5. Professional judgment
6. Evidence based approach

Monitoring and Evaluation

Each project must perform two types of evaluation and monitoring:

- Monitoring and evaluation of management and ecological milestones
- Monitoring and evaluation of available VBC

For this, each conservation project must have a monitoring scheme/plan associated to the performance standards which should include a) Parameters to be monitored, b) The frequency of monitoring, c) Data collection methods, and d) People responsible for the measurements.

Registration Document

Projects must create and submit a Registration Document. This document must detail the technical, legal and financial information of projects to issue VBC in the market. At first instance, information about the project developer and its generalities such as location and general characteristics must be delivered. Then, and to assure the projects are important and strategic for the conservation and restoration of key ecosystems, the suitability of the area must be justified, with a thorough complementarity and additionality analysis. Furthermore, the delimitation of the project area must be determined as well as its biophysical characteristics, land cover, and biological diversity. Next, it is necessary to specify the objectives, conservation actions to be carried out and the management strategies of the project. Likewise, once the objectives have been defined, the Credit Release Schedule and the Monitoring and Evaluation Plan must be detailed. Those sections must be accompanied by the performance indicators that will be measured to demonstrate biodiversity gains. Moreover, a risk analysis and the demonstration of the legal and financial conditions for permanence are mandatory. Finally, projects must specify how the registration of credits and environmental accounting will be done.



Disclaimer

The Protocol for the Issuance of Voluntary Biodiversity Credits is **one of the first protocols worldwide for the issuance of Biodiversity Credits**. In this sense, **this document is a Beta version 3**, which is under constant review by Terrasos, P4F and the different partners of the working group. **We invite stakeholders interested in this document to make constructive comments on it**. You can download the document on:

<https://terrasos-1.hubspotpagebuilder.com/protocol-for-the-issuance-of-voluntary-biodiversity-credits> and send comments or suggestions to biodiversitycredits@terrasos.co

VBC issuance in different scenarios

Here is an example of three different scenarios/projects on which the score for each differential factor varies according to certain criteria. Nevertheless, three aspects remain constant for all of them: the total project area equals 100 hectares (1,000,000 m²), the area dedicated to preservation actions equals 350,000 m² and the area for restoration is 650,000 m².

Scenario 1: The project takes place in a Critically Endangered (CR) ecosystem but with low connectivity levels. The duration of the project is 30 or more years, and both preservation and restoration actions are taken.

1		Scenario 1				
Features		Credit factors				Score
Area type	Area (m ²)	F1 Threat Category	F2 Connectivity	F3 Project Duration	F4 Activities to implement	
Preservation	350,000	–	–	–	0.23	80,500
Restoration	650,000	–	–	–	0.25	162,500
Project Total	1,000,000	0.25	0.1	0.25	–	600,000
TOTAL SCORE						843,000
Potential credits (10m ²)						84,300

Scenario 2: All four differential factors score the lowest values. The project occurs in a non-threatened ecosystem with a 20-21 years of duration, it does not generate nor improves regional connectivity and only performs preservation actions.

2		Scenario 2				
Features		Credit factors				Score
Area type	Area (m ²)	F1 Threat Category	F2 Connectivity	F3 Project Duration	F4 Activities to implement	
Preservation	1,000,000	–	–	–	0.23	230,000
Restoration		–	–	–	0.25	–
Project Total	1,000,000	0.22	0.1	0,05	–	70,000
TOTAL SCORE						600,000
Potential credits (10m ²)						60,000

Scenario 3: All four differential factors for the project score the highest values. The ecosystem where the project takes place is Critically Endangered (CR), its level of connectivity is high and improves the connectivity at regional level, the entire area is dedicated to restoration activities and the project duration is 30+ years.

3		Scenario 3				
Features		Credit factors				Score
Area type	Area (m ²)	F1 Threat Category	F2 Connectivity	F3 Project Duration	F4 Activities to implement	
Preservation		–	–	–	0.23	–
Restoration	1,000,000	–	–	–	0.25	250,000
Project Total	1,000,000	0.25	0.25	0.25	–	750,000
TOTAL SCORE						1,000,000
Potential credits (10m ²)						100,000

The next graph resumes the number of VBC and the differential factors determined by applying the Protocol for the three hypothetical scenarios

Issued VBC for different scenarios

