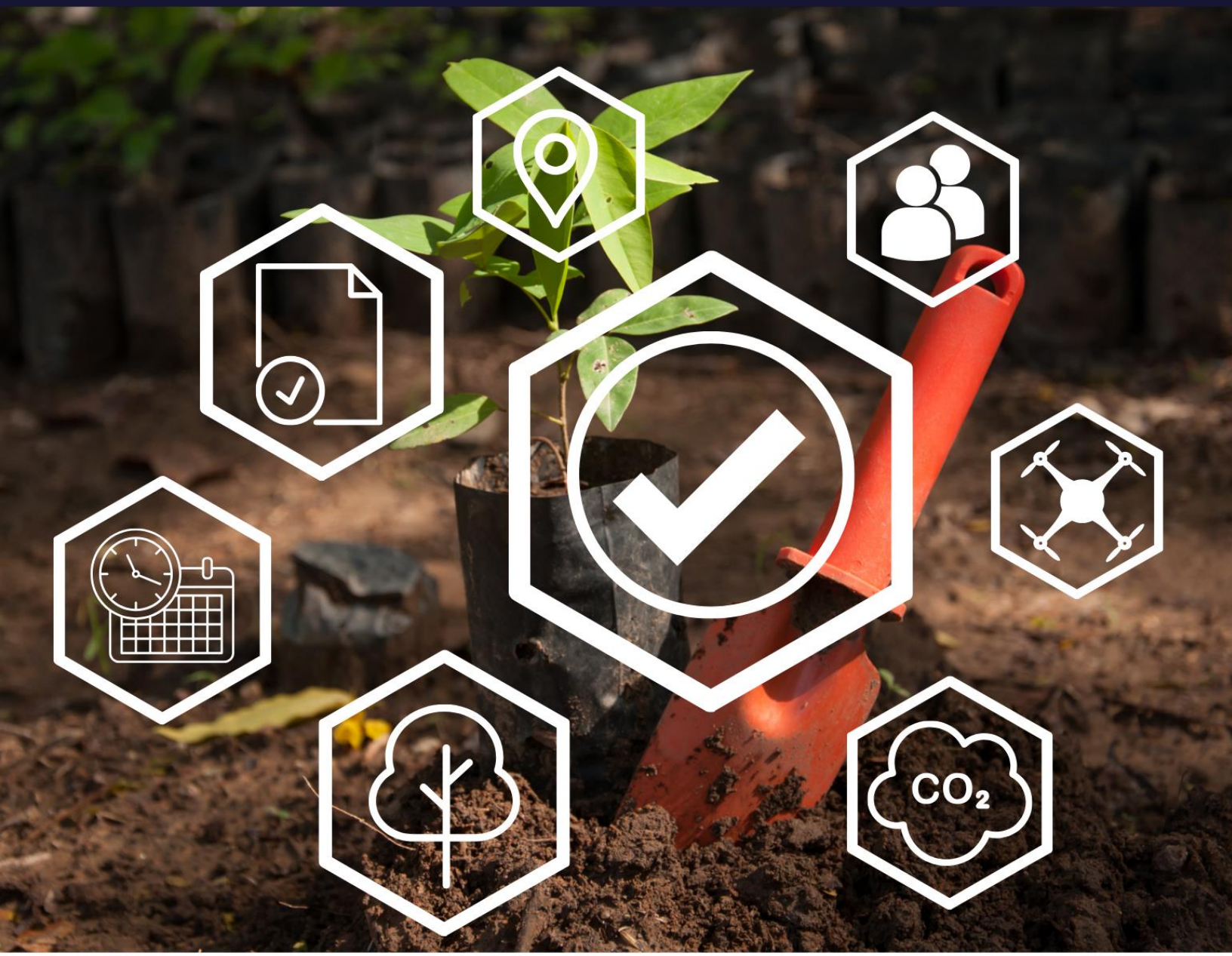
ASES ON-CHAIN PROTOCOL

PROCEDURE TO ENSURE: PERMANENCE, NON-LEAKAGE AND ADDITIONALITY

III. Procedures V2.0



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On-Chain Protocol

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INTRODUCTION

The biological sequestration of CO_2 through plant development and ongoing storage in soils and plant tissues is represented by the carbon credits the aOCP awards for nature-positive projects. aOCP encompasses a variety of ecosystems operating in various environments in addition to afforestation and reforestation. When dealing with the uncertainty associated with credits, there are several aspects to consider in order to calculate GHG sequestration in projects. Leakage, permanence, and additionality are three critical aspects to take into account when assessing a project's impacts in all project types.

The aOCP is concerned that neither of these issues prevents poor communities from participating in initiatives nor raises the hazards for those who do. Although the computation of these variables is thought to be required, the best approach to prevent them from becoming a barrier is to encourage the realization of other financial advantages through the sale of validated nature-positive credits.

In order to get more precise and trustworthy carbon credits, aOCP included additionality, leakage, and permanence of carbon removal nature-positive initiatives, as explained in this standard.

Provided that the additionality of a project has been demonstrated, the accuracy and appropriateness of the VNPC issuance depends on each of the four components of the carbon removals/reductions calculation: baseline carbon stocks, project carbon stocks, leakage emissions, and non-permanence deductions. For nature-based solutions (NBS) projects, key parameters include the carbon pools that are included in project and baseline calculations, the robustness of baseline assumptions, and whether applied data are species-specific or default.

I. ADDITIONALITY

One of the key components to support the confidence of carbon offsets and their integrity is the concept of additionality. This means that the participation of Project activities in the aOCP channels finance that would otherwise not be available into GHG removals and reductions that would otherwise not happen.

Project proponents are required to explain why the project is not economically or financially feasible without access to funding brought by the sale of VNPCs. This can be done through a simple cost analysis, investment comparison, or benchmark analysis. However, under the aOCP, ecological additionality serves as the primary criterion for determining the eligibility of carbon offset projects.

We measure additionality, and calculate Projects' impacts to be credited, using two econometric techniques in combination:

- Project treatment effect estimation through difference-in-difference (DiD) analysis.
- Generation of a control group, using pixels within the microbasin and/or adjacent microbasins to that of the Project area with similar characteristics, that is used to estimate the scenario without Project activities.

Project treatment effect estimation through difference-in-difference (DiD) analysis is a statistical method used to evaluate the causal impact of a specific intervention or treatment on an outcome of interest. It compares the changes in the outcome variable over time between a treatment group that received the intervention (Project activity) and a control group that did not.

The DiD analysis relies on the assumption that, in the absence of the intervention, the treatment and control groups would have followed a similar trend over time. By comparing the differences in outcomes before and after the treatment between the two groups, the DiD approach helps isolate the treatment effect from other confounding factors.

The key idea behind DiD analysis is that any changes observed in the outcome variable after the treatment can be attributed to the intervention if the treatment group experiences a different trend compared to the control group. By estimating the average treatment effect, DiD analysis provides an indication of the causal impact of the project or intervention on the outcome of interest.

DiD analysis is commonly used in various fields, including economics, public policy, and social sciences, to evaluate the effectiveness of interventions, policies, or programs. It provides a rigorous and robust method to estimate Project activities effects by leveraging the differences in trends between the Project and control groups over time.

Practically performing a difference-in-difference (DiD) analysis for the assessment of additionality of a carbon removal project based on reforestation involves the following steps:

1. Data Collection: Gather data on the carbon sequestration or removal from the reforestation project and data on a suitable control group, where no Project activities were implemented. The data should include information on carbon stocks or emissions, biodiversity, soil health and/or

erosion, or groundwater recharge in both groups before and after the implementation of the Project activities.

2. Define the Time Periods: Identify the relevant time periods for analysis. The "before" period represents the baseline or pre-treatment period, while the "after" period refers to the period after the Project activities implementation.

3. Identify the Treatment and Control Groups: This step is performed in 2 stages: at project assessment, before registration, and during monitoring, along the life of the Project. Before project registration the aOCP Operations Team assesses historical landcover trends in the Project region and models the future trend of the Project area -with and without Project activities-, additionality is determined based on the difference of the 2 future scenarios. Once Project activities are implemented and monitoring takes place, the control group includes similar sites or areas without Project intervention, and the treatment group includes the sites or areas where Project activities were implemented.

4. Check Assumptions: Ensure that the key assumptions of DiD analysis are met. The primary assumption is that, in the absence of the reforestation project, the state of the ecosystem, and therefore the carbon stocks or emissions, in the treatment and control groups would have followed a similar trend over time. Other assumptions are that treatment does not spill over to the control group or have any indirect impact on the control group's outcome variable, there are no other sudden and systematic events that occur around the time of the treatment that might influence the outcome variable, the treatment and control groups are subject to similar time-varying factors, apart from the treatment itself, that affect the outcome variable.

5. Calculate DiD Estimate: Compute the DiD estimate by taking the difference in the assessed parameter (whether it is change of carbon stocks or emissions, biodiversity, soil erosion or health index, groundwater recharge) between the treatment and control groups during the "after" period and subtracting the difference in the change during the "before" period.

6. Statistical Analysis: Use statistical methods to estimate the DiD coefficient and test for statistical significance. This helps to ascertain whether the change in the assessed parameter in the treatment group is significantly different from the change in the control group, after accounting for other potential factors that might affect the measured results.

7. Interpretation: Interpret the DiD estimate to assess the additionality of the carbon removal project. If the DiD analysis shows a statistically significant positive effect in the treatment group compared to the control group during the "after" period, it suggests that the Project activities have had an additional impact beyond what would have occurred without the intervention.

By following these steps, a DiD analysis can provide valuable insights into the effectiveness and additionality of a project. It allows for a rigorous evaluation of the project's impact, helping stakeholders make informed decisions about the Project and its VNPCs' integrity.

The aOCP can register projects already receiving carbon credits in other GHG programs or benefitting from public program support, with the following conditions:

- In compliance with the principle of no double counting, no carbon reduction/removal credits will be issued by the aOCP for the same benefits already being accounted for in the other program;

- Verified biodiversity, water, and soil credits can be issued only if the Project proponent proposes new activities for the benefit of biodiversity, water, and/or soil. These activities shall adress an ecological problem that represents an area of opportunity for the project to create a positive impact on nature, which would not take place if the project is not registered in the aOCP.

II. NON-LEAKAGE

Leakage is “the risk that emissions avoided or removed by a project are pushed outside the project boundary”. The sources of such emissions vary from sector to sector, however, they can be broadly categorized into two: market leakage (global) and activity displacement (local).

Since sources of leakage vary for each type of project, accounting requirements for leakage are determined at a methodological level. Leakage risks must be considered on a project-by-project basis, with assessments of both top-down and bottom-up risks, alongside project-specific safeguards. Only when such a holistic approach is employed can leakage risks be comprehensively evaluated.

Often, leakage can be anticipated or avoided by taking into account the needs that cause land-use changes as part of project development.

In addition, all activities undertaken during project activities that generate greenhouse gasses (GHGs) in addition to the anticipated amount are considered carbon leakage. Viewed another way, carbon leakage is also a deficiency in GHG sequestration.

Leakage must be accounted for and subtracted in order for project calculations to be credible and accurate. However, in many cases, it is not possible to accurately account for leakage.

Therefore, this document aims to analyze the factors that could threaten carbon benefits and durability due to internal and external factors, in order to answer the following two questions:

1. Which sectors should the leakage prevention mechanism target (support)?
2. What form should such a leakage prevention mechanism take?

To determine the final risk of leakage for each project, three factors will be taken into account, as shown in the following figure.

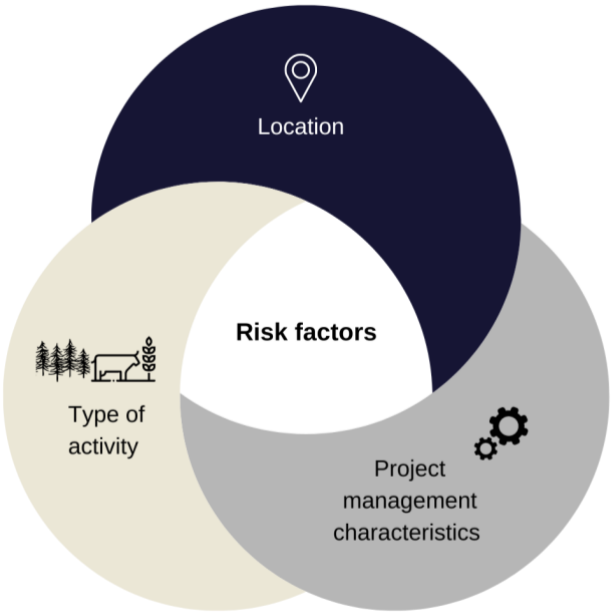


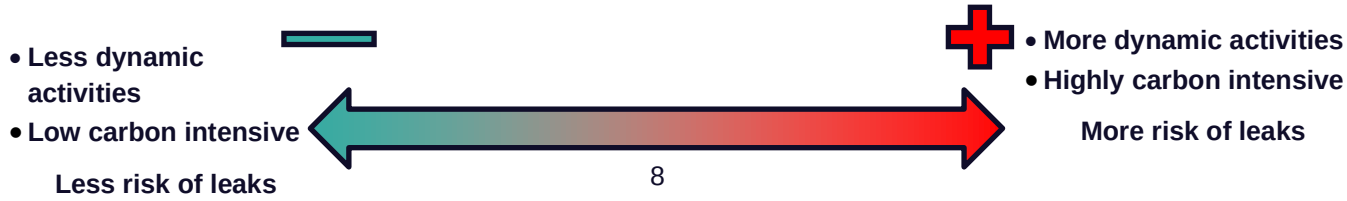
FIGURE 1. RISK FACTORS

The location of the project is essential to determine the risk of carbon leakage, as each country has different measures to mitigate greenhouse gasses. Countries with fewer restrictions tend to have more GHG emissions as companies relocate their economic activities to be less concerned about their emissions. This generates more GHG emissions and thus more leakage.

Since carbon leakage is driven by differences in the cost of carbon emissions between jurisdictions with and without carbon prices, the greater the impact of a given carbon price on sectors or firms, the greater the risk of leakage, all else being equal.

The type of activity is important since some projects are more dynamic than others and therefore have more difficulties to be constant in carbon sequestration. An example of this is silvopastoral systems, which are more dynamic than urban forest projects because the livestock managed in them reproduce and die continuously, modifying emissions.

Another important thing to take into account is the intensity of emissions from each activity. Activities with higher emissions have a higher risk of leakage.



Individual tree-based climate action / urban forest	Forest management	Regenerative agriculture	Silvopastoral management

The last factor to be taken into account is the project's characteristics. In this case, the dimensions of the project will be analyzed, whether it has the minimum to be sustainable, and whether there is no risk that it will fail to capture the expected carbon.

In order to identify the risk for the activities managed, it is necessary to consider the intrinsic characteristics of the projects in the different sectoral areas, as shown below:

II.1. LEAKAGE FOR FOREST MANAGEMENT PROJECTS

- The project is a forest production management project;
- It has temporary forest cover;
- Has several segments of different management classes;
- It doesn't have a management plan;
- Doesn't identify threats to the project nor treatments;
- Doesn't identify threats generated by the activity nor treatments;
- Needs infrastructure;
- Local people don't know about the project;
- It is not included in planning documents.

II.2. LEAKAGE IN SILVOPASTORAL MANAGEMENT

Silvopastoral management projects will be at greater risk of carbon leakage:

- When it is second and third level;
- When animal carrying capacity is exceeded;
- When there is only one variety of grass;
- When there is only one or few tree species;
- When there is no paddock rotation;
- When there is poor water management and water is not well distributed;
- When there is clearing, pruning and thinning of trees;
- When there is no maintenance activities;
- When the project is not included in planning documents.

II.3. Leakage in Individual tree-based climate action / urban forest management projects

These types of projects will be at greater risk of carbon leakage:

- When trees don't have the necessary space;
- When the trees are not suitable for the objective;
- When the trees affect the infrastructure;
- Is it a legal or corporate breach;
- When the soil characteristics weren't adequate for the trees;
- When the plant was produced with bare root techniques;
- When there are no post-planting activities;
- When the community doesn't know or participate in the project.
- When the project is not included in any planning document (governmental or organizational).

II.4. Regenerative agriculture projects will be at higher risk of carbon leakage:

- When it's a monoculture project;
- When no measures to improve soil fertility are implemented;
- When there is no preparation of supplies in situ;
- When none or few crop management activities listed above are implemented;
- When the communities don't know the project;
- When the project is not included in any planning document (governmental or organizational).

II.4. Final risk

The final risk rating will be calculated by the aOCP Operations Team by rating each factor on a scale of 1 to 10. Then, 50% of the final risk rate will correspond to the management characteristics of the project, 30% to the type of activity and 20% to the location.

Then, depending on the leakage risk, we will set aside an amount from the sequestration.

Table 1. Standardized leakage discount rate

Risk	Discount
Very high	Not acceptable
High	30% - 55%
Medium	10% - 30%
Low	1% - 10%

aOCP validators and verifiers will use a form (Appendix 1) that they will fill in with the PSF information to calculate the leakage discount rate and may also use it to request additional information from the project proponent.

III. PERMANENCE

Permanence refers to the assurance that the carbon removed or sequestered by a Project will remain stored for the entire crediting period, usually spanning several decades. When it comes to carbon sequestration, there are two traditional categories. Permanent geological sequestration entails CO2 being pumped down into cavities in rock to form a layer of calcium carbonate. This method is quite effective and very long-term but it is expensive. The second category is nature-based solutions, like planting a tree and carbon farming in soils. This type of sequestration is far more cost-effective and comes with many cobenefits for humans and wildlife, but it has a key disadvantage – it is impermanent. Eventually the tree will die or the soil will be eroded, and much of that captured CO2 will be released back into the atmosphere. Non-permanence is the risk that the carbon avoided or removed by a project does not remain so for the duration committed to. For NBS, non-permanence risks are natural hazards (e.g. extreme weather events), human hazards (e.g. mismanagement) and informational risks.

Furthermore, the permanence of carbon storage in vegetation and soil can differ due to a variety of factors. Vegetation carbon sequestration involves the storage of carbon in the aboveground biomass of plants, such as trees, shrubs, and grasses. The permanence of carbon storage in vegetation can be affected by factors such as land use changes, wildfires, disease, pests, and other natural or human-induced disturbances that can cause the loss of vegetation or the release of carbon back into the atmosphere. However, in general, the carbon stored in vegetation is considered to have a shorter lifespan than the carbon stored in soil. Soil carbon sequestration involves the storage of carbon in the organic matter of soil. The permanence of carbon storage in soil can be affected by factors such as erosion, changes in land use or management practices, and other natural or human-induced disturbances that can cause the loss of soil organic carbon. However, the carbon stored in soil is generally considered to have a longer lifespan than the carbon stored in vegetation, as it can remain stored in the soil for decades to centuries or even longer. Overall, the permanence of carbon storage in both vegetation and soil can be affected by a variety of factors, and it is important to implement measures to ensure the long-term stability of the carbon stored in both systems.

A rigorous and regular monitoring, reporting, and verification (MRV) process to track changes in carbon stocks over time, allows for early detection of any potential issues that could affect permanence and enables timely interventions.

Mitigating non-permanence risks is vital in ensuring that the Voluntary Carbon Market (VCM) acts as a truly effective long-term form of climate action. These risks may result from natural hazards or project-level issues, such as extreme weather events, land tenure contentions, or project-related financial risks. If such risks - whether human or natural - are not addressed, carbon can be re-emitted and undermine a project’s carbon benefits, resulting in reversals. A full assessment of these risks requires an understanding of: 1) how long is actually committed to ensuring the carbon avoided or removed remains so, 2) the mechanisms in place to guard against any losses, and 3) the strength and accuracy of the claims made.

For NBS projects, mechanisms in place to guard against any losses include using long-term contracts or insurance funds to ensure the permanence of the carbon credits. Project longevity risks can be reduced through proper management and financial plans, and if there is a legal agreement or requirement to continue the project, such as a conservation easement or protected area law. A variety of insurance mechanisms can include bonds and letter of credit, designed to act as a proof that a project developer can cover the costs of sufficient credits to offset a reversal event. A common practice is the deposit of a portion of credits into a global buffer pool ready to use in case of reversal. The buffer size, i.e. the proportion of a project's credits to be transferred to the global buffer pool is determined for each project, based on the results of the risk assessment. Furthermore, in case of reversal and use of the credits in the buffer pool, a new risk assessment shall be conducted and the buffer size recalculated.

III.1. INFORMATIONAL RISKS AND SAFEGUARDS

Another key part of non-permanence risk is a project's exposure to information risk, i.e. the reliability of the data used to report carbon performance or to determine natural and human risks. A project's commitment and enforceability are significantly linked to the reliability and disclosure of the information used. The strength and accuracy of the claims made can be safeguarded by:

a) using conservative baselines to estimate carbon sequestration,
b) conducting accurate and comprehensive risk assessments that take into consideration not only the natural risks but also the social, economic, and political situation of the region where the project is located that can lead to the Project's commitments not being fulfilled,
c) implementing monitoring and verification systems to track changes in carbon storage over time,
d) using trustable data sources, considering that, according to the World Bank Property Rights Index (WBPRI) and the Corruption Perceptions Index (CPI), some national data sets can be subject to inaccuracies and therefore not completely reliable.

III.2. USE OF A BUFFER POOL IN THE AOCP.

The project's contribution to the buffer as a percentage of the total number of credits it will generate is determined by project-specific risk assessments that support the identification and mitigation of key risks. The risk assessment shall include internal, external, and natural risk factors.

Internal risk factors:

- Operational risks associated with the day-to-day operations. This may include human error, system failures, or procedural inadequacies. These risks are assessed by conducting a thorough review of the Project activities and procedures, identifying vulnerable points and the measures to mitigate them.
- Compliance risks involve risks associated with non-compliance with regulatory or industry standards. These are assessed through the review of applicable certification protocols, legal requirements, and industry best practices to ensure full compliance. Regular training and audits can help mitigate compliance risks.

- Resource risks are related to the availability and allocation of resources, such as finances, personnel, and technology. They are mitigated by assessing the adequacy of resources allocated for the certification process, identifying potential shortages, and having contingency plans in place.
- Financial risks related to budget overruns, funding shortages, or financial mismanagement. Mitigation measures include the implementation of robust financial controls, conducting regular budget reviews, and establishing contingency funds.
- Legal risks associated with contracts, agreements, or legal disputes. These can be mitigated by ensuring contracts are well-drafted and engaging legal counsel for thorough reviews, as well as by establishing clear dispute resolution mechanisms.

External Risk Factors:

- Regulatory risks are related to changes in government policies, regulations, or international agreements. These are mitigated by staying updated with relevant legislation and engaging with industry associations or advocacy groups to anticipate and adapt to regulatory changes.
- Reputation risks can arise from issues like compliance breaches, negative publicity, or stakeholder dissatisfaction. Reputation can be safeguarded by implementing robust communication strategies, maintaining transparency, and addressing concerns promptly.
- Supply chain risks include disruptions, shortages, or quality control issues. Mitigation can be done by conducting thorough supplier assessments, establishing alternative suppliers, and implementing supply chain monitoring systems.
- Geopolitical risks are related to geopolitical events, such as border disputes or territorial conflicts, which can impact project sites.

Natural Risk Factors:

- Environmental risks include extreme weather events, natural disasters associated with geological events like earthquakes, landslides, or soil instability; climate change impacts, such as sea-level rise or changing precipitation patterns; risks related to water resources, such as floods, droughts, or water quality issues; or habitat degradation. Mitigation is done by conducting thorough environmental impact assessments, geological surveys, climate vulnerability assessments, hydrological modeling, establishing early warning systems. and implementing adaptive management strategies, such as engineering measures to minimize geological risks and water management strategies.
- Ecological risks are associated with changes in ecosystems, such as shifts in biodiversity, species behavior, diseases, pests, or invasive species introduction that can affect ecosystems. Regular ecological assessments and pest management plans can help identify and respond to ecological risks.

It is a good practice to continuously monitor and update risk buffer allocations over the course of the project in response to changes in project risks. This risk assessment will be conducted during the monitoring campaigns, its frequency will be determined in the monitoring plan for each Project activity and can be modified if unexpected events occur in the Project area.

- **For how long the credits are locked up?**

Buffer credits are issued, as part of the batch issued after verification, and then transferred to the buffer pool, where the aOCP gathers and holds the buffer credits from all aOCP Project Activities, ready to use them in case a project has a reversal. If this occurs, the concerned project's credits will be used (retired) to compensate for the loss, and if the loss is greater than the project's buffer, buffer credits from other projects can be used to cover it.

The aOCP aims to promote climate action by restoring nature while ensuring its resilience to climate change. In this sense it establishes an important contribution of each registered Project activity to the global buffer pool. At the end of a project's commitment period, credits remain untouched even after the end of the project's crediting period. This further reduces the risk of over-crediting and conforms a robust pool of buffer credits to use in case that other projects suffer a reversal greater than the size of its own buffer.

In case of a reversal the following actions take place:

- Cancellation of credits of the project's buffer pool
- Project's credits that have been issued and are available in the project's Nat5 account will be used to compensate the loss, or an equivalent number of credits purchased from other aOCP projects will be used to compensate the loss.
- If the reversal exceeds the Project's own buffer pool contribution and its available credits in Nat5, credits from the General aOCP buffer pool will be retired on a 'first-in, first-out' basis, aligning lost credits with buffer pool credits at a sector level (e.g. regenerative agriculture credits in the buffer pool would be used to compensate for reversals of regenerative agriculture projects). In the case where credits from the General aOCP buffer pool are used to compensate for reversals, the Project proponent shall replace the number of credits used with credits issued from the same or other aOCP Project activities. The Project proponent shall agree to this condition at the moment of signing the contract during the registration stage.

APPENDIX 1. FORM FOR CALCULATING THE LEAKAGE DISCOUNT RATE

AP1.1. FOREST MANAGEMENT

General characteristics	
Project localization	Provide the localization of the project in geographic coordinates. Add a map and/or a KML or shape file.
General type of forest management	Provide the general type of the forest activity destined to the project. It can be: • **Protection;** • **Production; or** • **Restoration.**
Forest cover	Write if the forest cover is permanent or temporary. • **Permanent forest cover is considered to be those that prescribe the felling of only a few trees in a minimum management unit;** • **Those of temporary forest cover are those that indicate the felling, and consequently the regeneration, of all the trees in a minimum management unit at a given moment.**
Total surface	Provide the total area of the forest management project in hectares
Density	Provide the density of the plantation in • **Number of trees per hectare;** • **Volume per hectare.**
Age	Provide the range of ages of the trees in the Project area.

Physical characteristics	
Climate	Provide the type of climate where the project is. Use the Köppen classification[1].
Soil type	Provide the type of soil(s) where the project is. Use the FAO classification of soils[2] and descriptions.

[1] https://www.gloh2o.org/koppen/

[2] https://data.apps.fao.org/

Physical characteristics	
Topography	Provide a description of the topography where the project is. Include: ● Mountain system; ● Physiographic province; ● Maximum and minimum altitude; ● Slope; ● Exposition.
Hydrology	Provide a description of the hydrology system where your project is. Include: ● Region and basin; ● Sub-basin; ● Micro-watershed; ● Permanent and intermittent currents (length); ● Water bodies (m^2).

Classification and biology

Fill the table with the different classes of the forest management project.

Habitat type	Classification and management type	Area	Description of flora	Description of fauna	Physical characteristics	Observation

Where:

- **Classification and management type can be: (1) Areas of conservation and restricted use, (2) Production areas, (3) Restoration areas, (4) Forest protection areas (5) Other uses, specify use;**
- **Area: area of the segment in hectares;**
- **Description of flora:** describe the dominant species of flora in the project;
- **Description of fauna:** describe the fauna in the area and add if they are under any protection and/or endangered status;
- **Physical characteristics:** same as in the section above;
- **Observation:** add any important and useful comments from that segment that may help to have a better understanding of the area.

Management plan

Tell us if there is a management plan, when it was made and the temporality that manages.	
Objectives	If it's the case. Provide the objectives of the management plan
Type of forest management	If it's the case. Provide the general type of the forest activity destined to the project in the plan. It can be: ● **Protection;** ● **Production; or** ● **Restoration.**
Threats to the activity	Provide the threats identified in the management plan that can harm the forest activity.
Treatments applied	Provide the treatments identified in the plan to be applied to the threats listed above.
Threats generated by the activity	Provide the threats identified in the plan that the forest activity produces in the area
Treatments applied	Provide the treatments identified in the plan to be applied to mitigate the threats generated

Existing infrastructure
Describe the infrastructure built in the area. Include features like: ● **Use;** ● **Material;** ● **Length/area;** ● **Impacts generated;** ● **Years it will be active;** ● **Provide geographic coordinates and kml or shapefile.**
Necessary infrastructure
Describe the infrastructure that needs to be built. Include features like: ● **Use that will be given;** ● **Material;** ● **Length/area;**

- **Impacts generated;**
- **When will it be built? Provide geographic coordinates and kml or shapefile;**
- **Years it will be active.**

Local communication / participation	
Are the local / regional habitants aware of the project	☐ Yes ☐ No How do they conceive your project?
How did you inform the people about the project	Provide a summary of your communication activities
At what scale were your activities performed?	The scale can be local, regional, national, etc.
What was the scope of these activities?	How many people attended the activities or how many did you approach. Describe this population
Does your activity take into account the participation of local people?	☐ Yes ☐ No How do they participate?

Planning documents	
Is your project framed in a planning document?	☐ Yes ☐ No
What type is it?	It can be urban planning, regional, stand alone, sector, etc.
What are the objectives?	Proved the principal objectives of the plan and the relevance of the project with them

When does it expire?	Write the year up to which the document is valid

AP1.2. SILVOPASTORAL MANAGEMENT

General characteristics	
Silvopastoral level	Provide the level of your silvopastoral system, it can be first, second or third level. Where: ● **First refers only to pastures;** ● **Second, when you have shrubs as protein banks;** ● **Third, when you have medium-sized trees, large branches and fruits.**
Project localization	Provide the localization of the project in geographic coordinates. Add a map and/or a KML or shape file.
Total surface	Provide the total area of the forest management project in hectares
Variety of animals	Provide the species and number of the animals in your project. Include age.
Variety of grasses	Provide the species of grasses in your project. Include age.
Variety of trees	Provide the species of trees in your project. Include age.
Density of trees	Provide the density of the trees in: ● **Number of trees per hectare;** ● **Volume per hectare.**
Age of project	Provide the time your project has been running

Type of trees		
Select the options that represent your trees		
☐ Trees in paddocks	☐ Protein bank	☐ Both

In case you have trees in paddocks, select how they are distributed ☐ Living fences ☐ Scattered trees ☐ Wooded areas on the farm
In case you have trees as protein banks, select how do you manage them ☐ Cutting and hauling ☐ There is irrigation ☐ Livestock can enter ☐ Other: explain How many days will the cut be made?
*In case you have trees in paddocks and as protein banks, check all the options

Extra activities	
There was clearing	Explain if it was necessary to clear trees to establish your project. Include how many trees or how much extension.
Paddock rotation	Explain if there is a routine of rotating paddocks for cattle
Fruit production	Do you have trees for fruit production or commercialization
Pruning of trees	Explain if the trees are pruned and how often it is done
Thinning of trees	Explain if there is a thinning of the trees. How many trees are thinned? How much thinning has been done and is planned to occur?
When cattle eat them	Explain if the cattle eat the trees as first option or as the last option when there is no grass left

Maintenance activities	
Remove nearby weed	Explain if you remove unwanted weed. How often?
Agrochemical	Explain if you apply any agrochemicals. Which? How often? How much (liters or kilograms per hectare)?
Feeding program	Do you have a feeding program for your livestock?
Extra nutritional	Do you give extra nutrition to your livestock?

Local communication / participation	
Are the local / regional habitants aware of the project	☐ Yes ☐ No How do they conceive your project?
How did you inform the people about the project?	Provide a summary of your communication activities
At what scale were your activities performed?	The scale can be local, regional, national, etc.
What was the scope of these activities?	How many people attended the activities or how many you approached. Describe this population
Does your activity take into account the participation of local people?	☐ Yes ☐ No How do they participate?

Planning documents	
Is your project framed in a planning document?	☐ Yes ☐ No
What type is it?	It can be urban planning, regional, stand alone, sector, etc.
What are the objectives?	Proved the principal objectives of the plan and the relevance of the project with them
When does it expire?	Write the year up to which the document is valid

AP1.3. INDIVIDUAL TREE-BASED CLIMATE ACTION / URBAN FOREST

General characteristics	
Project localization	Provide the localization of the project in geographic coordinates. Add a map or a KML or shape file.
Total surface	Provide the total area of the project in hectares
Variety of trees	Provide the species of trees in your project. Include age and how many.
Density of trees	Provide the density of the trees in: • **Number of trees per hectare;** • **Volume per hectare.**
Age of project	Provide the time your project has been running

Spacing and current regulations	
What benefits or primary function are expected from them?	Explain the objectives of your project
What are the spatial features available for trees?	Provide a description of the site where your project is, in order to have a better idea about it. Add photographs.
Is there a minimum space to accommodate trees, and what is it like?	Comment on whether there is a special place to plant the trees and how it is
Is the infrastructure compatible with the trees?	Do the trees affect the surrounding infrastructure? Explain your answer. Add photographs.
The treetop is the most suitable for objectives and infrastructure	Explain if the treetop helps you achieve your goals and does not affect the infrastructure. Explain your answer. Add photographs.
Proper distancing	Do the trees have a proper distance for growing and taking into account its surroundings. Explain your answer. Add photographs.

Regulations	Do the regulations of the different administrative levels endorse the plantation? Which one?

Soil conditions	
How degraded was the soil	Describe how degraded the soil was when the plants were planted.
Is the porosity of the soil adequate for the plant?	☐ Yes ☐ No
Were the soils compacted?	☐ Yes ☐ No
Did you check the pH of the soil? Was it suitable?	Provide the pH before project activities, any corrective treatment performed and the pH after.

- **How was the plant produced?**

☐ Bare root ☐ Plants in containers ☐ Root ball plants

Which of these activities are carried out after planting. Write down how often you perform each of them.

☐ Irrigation

☐ Fertilization

☐ Protection

☐ Mulch

☐ Substitution

☐ Monitoring

Local communication / participation	
Are the local / regional habitants aware of the project	☐ Yes ☐ No How do they conceive your project?
How did you inform the people about the project	Provide a summary of your communication activities
At what scale were your activities done	The scale can be local, regional, national, etc.
What was the scope of these activities?	How many people attended the activities or how many you approached. Describe this population
Does your activity take into account the participation of local people?	☐ Yes ☐ No How do they participate

Planning documents	
Is your project framed in a planning document?	☐ Yes ☐ No
What type is it?	It can be urban planning, regional, stand alone, sector, etc.
What are the objectives?	Proved the principal objectives of the plan and the relevance of the project with them
When does it expire?	Write the year up to which the document is valid

AP1.4. REGENERATIVE AGRICULTURE

General characteristics	
Project localization	Provide the localization of the project in geographic coordinates. Add a map or a KML or shape file.
Total surface	Provide the total area of the project in hectares
Variety of crops	Provide the species of crops in your project. Include age and how many you have.
Density of crops	Provide the density of the crops in: • **Number of crops per hectare.**
Age of project	Provide the time your project has been running

Recovery of soil fertility	
Explain what measures you take to improve soil fertility.	
Minerals	Have you done soil studies to know their composition or detect mineral deficiencies? ☐ Yes ☐ No If it's the case, how often? Mention noteworthy results.
Native microorganisms	Do you reproduce native microorganisms? ☐ Yes ☐ No If it's the case, Which? Do you introduce other microorganisms to benefit soil fertility? If it's the case, Which one(s)?
Organic Matter (OM) and Vegetable Mulch	Do you apply organic matter or vegetable mulch?

	☐ No ☐ only organic matter ☐ only vegetable mulch ☐ none If yes, provide a brief description

Preparation of supplies in situ with locally available materials	
Do you prepare liquid fertilizers?	☐ Yes ☐ No Explain
Do you prepare solid fertilizers?	☐ Yes ☐ No Explain
Do you prepare something to control pests and diseases?	☐ Yes ☐ No Explain
Do you do another activity to contribute to soil fertility and cost reduction?	☐ Yes ☐ No Explain

Crop management
In your crop management which of the following options do you apply? ☐ Vegetable mulch ☐ Preparation of cultivation beds with hügelkultur ☐ Agroforestry techniques, ☐ Association of crops ☐ Biointensive crops
Mention and describe any other activity that you do and is not listed above.

Local communication / participation	
Are the local / regional habitants aware of the project	☐ Yes ☐ No How do they conceive your project?
How did you inform the people about the project?	Provide a summary of your communication activities
At what scale were your activities done?	The scale can be local, regional, national, etc.
What was the scope of these activities?	How many people attended the activities or how many you approached. Describe this population
Does your activity take into account the participation of local people?	☐ Yes ☐ No How do they participate?

Planning documents	
Is your project framed in a planning document?	☐ Yes ☐ No
What type is it	It can be urban planning, regional, stand alone, sector, etc.
What are the objective(s)?	Proved the principal objectives of the plan and the relevance of the project with them
When does it expire?	Write the year up to which the document is valid

DOCUMENT HISTORY		
Version	**Date**	**Comments**
V2.0	15/08/2023	● Second version released for review by the aOCP Steering Committee under the aOCP Version 2.
V1.0	12/01/2023	● Initial version released for review by the aOCP Steering Committee under the aOCP Version 1.