



2025

ALIGNMENT ASSESSMENT

LT-007-SPA-072023 CÁCERES, SPAIN
Ecological restoration in Alia, Cáceres, Spain
Life Terra

June 20, 2025





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ALIGNMENT EVALUATION FOR THE PROJECT SUBMITTED BY LIFE TERRA, “ECOLOGICAL RESTORATION IN ALIA, CÁCERES, SPAIN”, IDENTIFIED WITH THE UNIQUE CODE LT-007-SPA-072023 CÁCERES, SPAIN.

CONTEXT

As part of the certification process for positive nature projects and the subsequent issuance of Verified Positive Nature Credits (VNPCs) under the Ases On-Chain Protocol (aOCP) Certification Program, the project developer “Life Terra” presented the “Ecological restoration in Alia, Cáceres, Spain” project. This project activity is in the aOCP onboarding stage. Compliance with the aOCP principles, values, standards, and requirements is a fundamental requirement for participation in the program. This assessment is carried out during the onboarding stage, prior to the registration of project activities, as stipulated in the aOCP Procedures document, which describes all the stages a project goes through from its inception to issuance, sale, and purchase.

Since the Project's activities have already been implemented before the start of the onboarding process, it participates as a Modality B project. According to the aOCP Procedures document, Modality B projects must go through the following process to be registered:

1. Application through the Project Submission Form (PSF), completed by the project proponent.
2. Documentation review and alignment assessment, conducted by the aOCP Operations Team.
3. Payment of incorporation fee by the project proponent.
4. Project pre-registration, carried out by the aOCP Operations Team.
5. On-site validation of the Project's implemented activities, carried out by the OCP Operations Team.
6. Preparation of Baseline Report, Monitoring Plan, Credit Issuance Contingent Table, carried out by the aOCP Operations Team.
7. Project proponent agreement.
8. Project Validation by an external and independent Validator, delivering a Project Validation Report.
9. Project registration letter and issuance of first credits, carried out by the aOCP Operations Team.

This report corresponds to step 2, Alignment Assessment.

ALIGNMENT ASSESSMENT

The aOCP is based on sound principles intended to ensure that Project activities seeking registration and accreditation with VNPC demonstrably and positively impact ecosystems in a





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real, measurable, permanent and additional manner, while avoiding any harm to ecosystems and/or society.

Compliance with the aOCP principles, values, standards, and requirements is a fundamental requirement for participation in the program. This assessment is conducted during the onboarding phase, prior to the registration of project activities. This mandate is stipulated in the aOCP Procedures document, which describes all stages of a project from its inception to the issuance, marketing, and retirement of VNPCs.

A positive result of the Alignment Assessment with the principles, values, rules and requirements of aOCP confirms that the proposed Project activity:

1. It belongs to one of the following types of projects:
 - a. Forest management, including afforestation, reforestation and revegetation (ARR)
 - b. Regenerative agriculture
 - c. Silvopastoral management
 - d. Urban Forests / Climate Action of Individual Trees
 - e. Biochar
2. Adheres to environmental and social requirements of doing no harm;
3. It is expected to have positive impacts on biodiversity;
4. The Project was developed less than 5 years ago;
5. Meets the additionality criteria for the requested VNPCs;
6. Has documentation proving ownership of the land or an agreement for the duration of the project;
7. The Project area has not been degraded, deforested or burned in the last 24 months;
8. For projects applying for biodiversity credits for species conservation, a positive Alignment Assessment also confirms that the proposed project area has a high conservation value due to its preservation status;
9. Areas where the average species abundance indicator (also reported as biodiversity integrity) is less than 0.80, indicating that biodiversity is at risk and requires restoration actions, are eligible for biodiversity restoration credits.
10. The key species for biodiversity conservation reported by the Project proponent are recognized as Key Species according to the criteria established in the aOCP Methodology for the evaluation of biodiversity for species conservation V1.0.

Certain circumstances may result in an unfavorable evaluation and, if not satisfactorily rectified or clarified, could lead to the rejection of the Project activity registration within the aOCP.

These circumstances include:

- Failure to comply with the principles, values, standards and requirements of aOCP,





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- Issuance of contradictory and/or false statements by the proponent or developer of the Project,
- Decreased confidence in the Project activity's ability to deliver the intended ecosystem and/or societal benefits due to an inadequate risk management plan, which includes a comprehensive assessment of internal, external, and natural risks, as well as risk mitigation and contingency planning.

According to the information provided by the Project Proponent in the Project Submission Form (PSF), the “Finca Alía” project, managed by Life Terra in Cáceres, Spain, is a forest management initiative that was completed in May 2023. The project involved the ecological reforestation of 383,421.5 m² with 60,717 trees and shrubs from 19 native species including *Quercus pyrenaica*, *Castanea sativa*, and *Lavandula stoechas*. The goal was to replace non-native pine and eucalyptus species with diverse native vegetation to enhance soil quality, support wildlife, and provide sustainable resources for the landowner. Activities also included professional planting, recovery of native grape varieties, and plans to develop an eco-hostel for environmental education and community engagement. The project is applying for Carbon (VCC), Biodiversity (VBBC), and Water (VWC) credits.

The project area and sampling points used for the present analysis are shown in Figure 1.

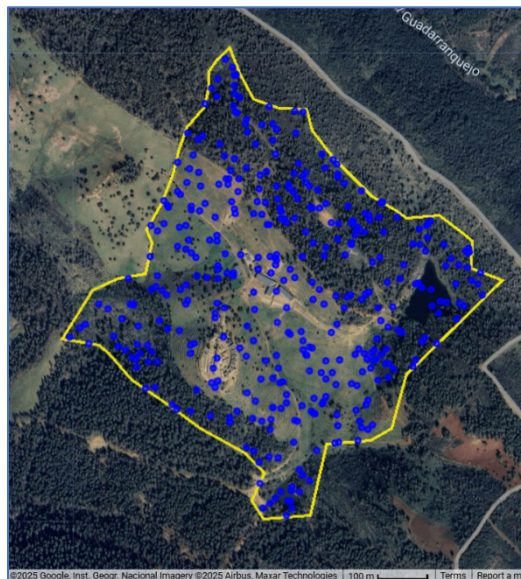


Figure 1. Project area and sampling points used for NDVI analysis.

METHOD OF ANALYSIS

The proposed Project activity was assessed to determine its alignment with aOCP rules and requirements, using the following checklist.





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Alignment criteria	Y: Yes N: No P: Partially NA: Not applicable	Comments
Does the project belong to one of the following types? <ul style="list-style-type: none"> Forest management, including ARR Regenerative agriculture Silvopastoral management Urban forests / individual climate action Biochar 	Y	The project falls into the forest management category.
Does the project meet the requirement of not causing environmental and social harm?	Y	
Has documentation proving landownership or an agreement been provided for the duration of the project?	Y	
If the project has already started, is it less than 5 years old?	Y	The project took place between January and May of 2023.
Are the species considered for reforestation classified as "invasive" or "exotic"?	N	
Is the project expected to have positive impacts on biodiversity?	Y	The introduction of 19 native species will positively impact biodiversity.
Do the requested VNPCs meet the additionality criteria?	Y	
Have any trees or shrubs been cut down in the project area in the last 2 years?	N	
Is the project area located in a Protected Natural Area?	Y	100% of the Project área is located within the Protected Area "Sierra de las villueras y valle del guadarranque".
For biodiversity restoration credits, the biodiversity integrity indicator is < 80%.	Y	The biodiversity integrity index is 76.13%.





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Alignment criteria	Y: Yes N: No P: Partially NA: Not applicable	Comments
For biodiversity conservation credits, the biodiversity integrity indicator is > 80%.	N/A	
Are the proposed keystone species aligned with the aOCP criteria for keystone species?	Y	
For carbon credits, what is the value of the ARR Site Suitability Statistic?	N	72.4% Eligible, project within predominantly Rangeland (Suitable)
For carbon credits, what is the value of the New Project Performance Benchmark Estimation tool?	N	The performance benchmark is likely to be negligible or low.

Historical land cover dynamics were analyzed using high-resolution Google Earth imagery and the Normalized Difference Vegetation Index (NDVI). NDVI is a widely used remote sensing metric that provides information on the density and health of vegetation in a specific area. It is calculated from the difference between the reflectance of near-infrared light and red light from the Earth's surface.

By analyzing historical land cover, NDVI allows us to track changes in vegetation over time. By examining archived NDVI data, it is possible to observe trends in vegetation density, identify changes in land-use patterns, and monitor the effects of factors such as urbanization, deforestation, or natural disasters.

NDVI provides information on the quantity and quality of vegetation in a given area. It ranges from -1 to +1, with values close to +1 indicating dense, healthy vegetation, while values close to -1 suggest the absence of vegetation or the presence of artificial surfaces.

Using Google Earth Engine, the maximum monthly NDVI was calculated from January 2019 to May 2025 using Sentinel-2 satellite imagery. Random control points were then plotted on each property (Figure 1), and the monthly NDVI value at each point was extracted.

Google Colab was used to generate boxplots showing the distribution of NDVI values at the control points. A boxplot is a standardized way of displaying the distribution of a data set based on its five-point summary: the minimum, the first quartile [Q1], the median, the third quartile [Q3],





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and the maximum. Boxplots provide information about outliers, data symmetry, the degree of clustering, and whether and how the data are skewed.¹

Biodiversity integrity quantifies the impact humans have had on the integrity of species communities. Anthropogenic pressures, such as land-use conversion, cause dramatic changes in the composition of species communities, and this layer illustrates these changes by focusing on the impact of forest changes on biodiversity integrity². This information was evaluated through the Orbify platform.

RESULTS

Analysis of Google Earth imagery (Figure 2) reveals significant change in vegetation cover between 2019 and 2024. In 2019, much of the land is bare or covered in minimal vegetation. Following the replantation activities in 2023, organized planting can be seen in the 2024 image, and the overall vegetation cover is much more significant. A detailed analysis of the evolution of the vegetation cover can be seen in the NDVI analysis of the project area (Figure 3).

¹Galarnyk, M. Understanding box plots. <https://builtin.com/data-science/boxplot>

²Hill, S.L., Arnell, A., Maney, C., Butchart, S.H., Hilton-Taylor, C., Ciciarelli, C., ... and Burgess, N.D. (2019). Measuring the status and change of forest biodiversity globally. *Frontiers in Forests and Global Change*, 2, 70.



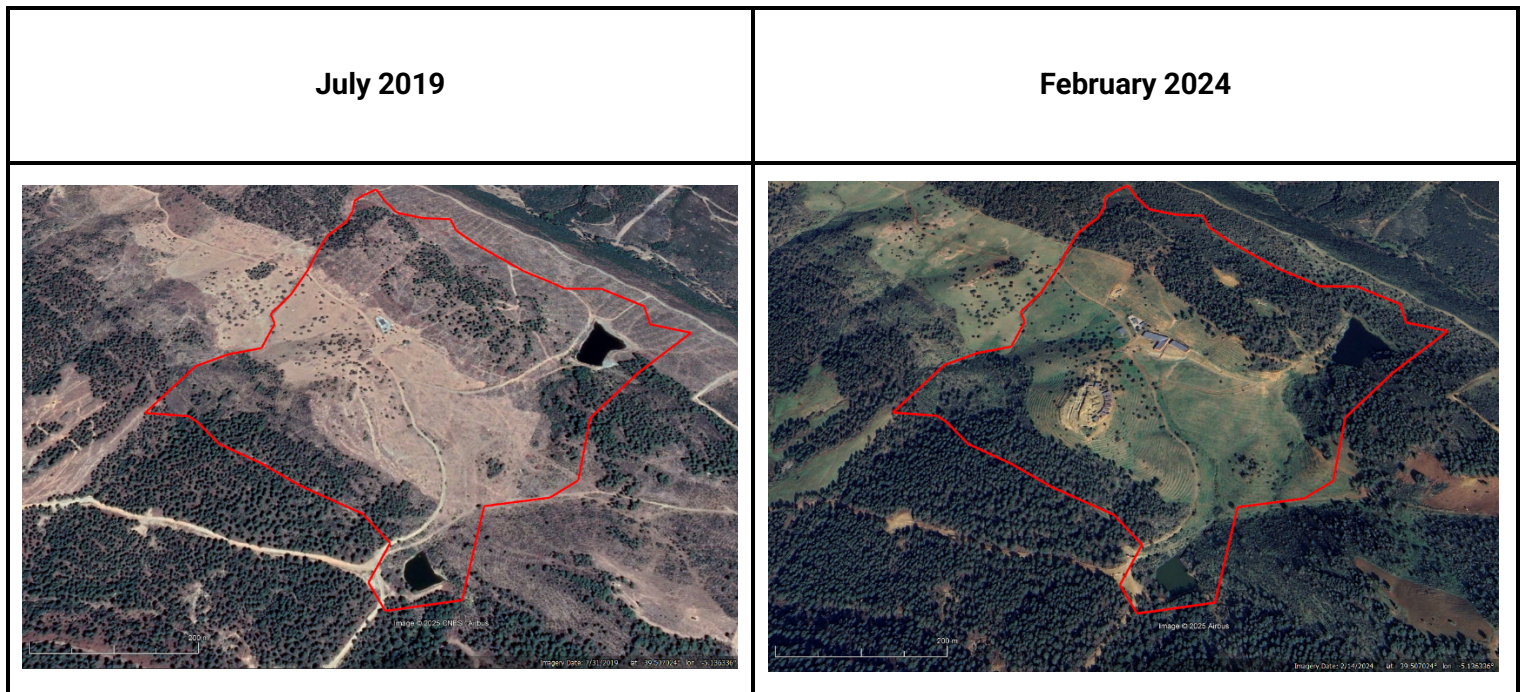


Figure 2. Google Earth images of the Project area from 2019 and 2024.

The NDVI analysis from 2019 to 2025 (Figure 3) shows an overall upward trend in vegetation health, with a marked seasonal pattern and long-term improvement. After a steep decline in NDVI values during 2019, the vegetation began recovering in late 2019, with the NDVI average gradually increasing from 0.430 in December 2019 to 0.499 by May 2025. Seasonal fluctuations persist, with lower values during mid-year (summer) and peaks toward the end of the year, but the general trend since 2023, following the replantation efforts, shows significantly higher NDVI values—often above 0.6—indicating enhanced vegetation cover. This suggests successful restoration efforts, resulting in a more resilient and healthier vegetative landscape over time.

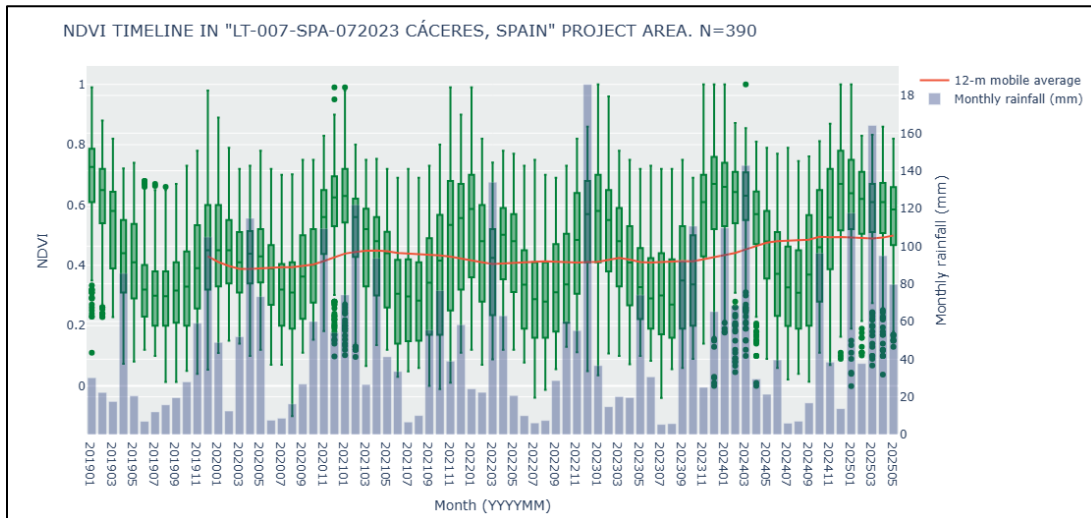


Figure 3. Monthly NDVI and precipitation from January 2019 to May 2025

Biodiversity integrity remained stable at 76.13% between 2017 and 2020 (Figure 4); therefore, this value is aligned with biodiversity restoration goals.

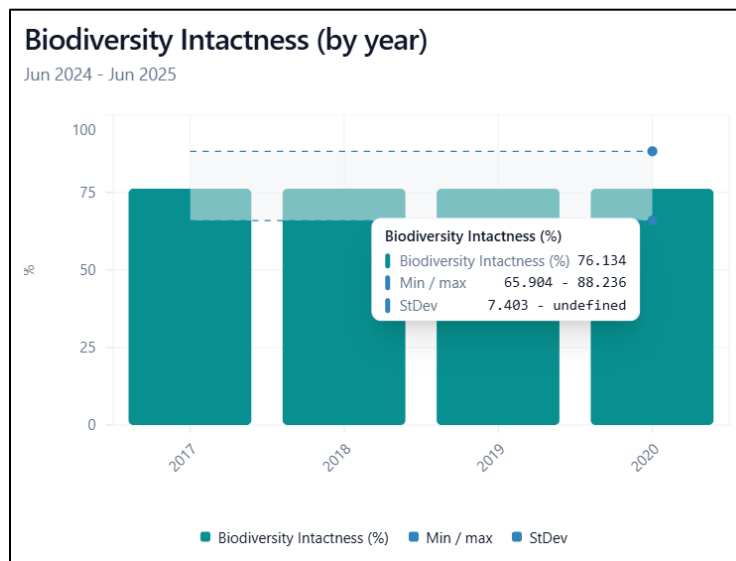


Figure 4. Biodiversity integrity

The "Finca Alia" project prioritizes the use of 100% native species adapted to the Mediterranean ecosystem, contributing to habitat complexity and ecological resilience. By removing invasive tree species and planting a diverse mix of 19 native species, the project aims to restore habitat for local flora and fauna, improve ecosystem functionality, and increase biodiversity indices.



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Biodiversity benefits were assessed using the Shannon Index before and after intervention, confirming gains in species richness and evenness. Additionally, the creation of an eco-hostel with interpretive trails supports environmental education and public awareness, while the integration of traditional land use fosters long-term sustainability.

Beyond the scope of the project, there are other species, particularly those identified as key due to their endemism or classification as at-risk species. Their potential distribution is found within the project area, according to bibliographic information, which can be found in Table 1.

Table 1. Key species with potential distribution (inaturalist.org)

Class	Scientific name	Common name	National status*	World Status**	Distribution Spain
Fauna					
Aves	<i>Hirundo rustica</i>	Barn Swallow		LC	Native
Aves	<i>Saxicola rubicola</i>	European Stonechat			Native
Aves	<i>Gyps fulvus</i>	Eurasian Griffon		LC	Native
Reptilia	<i>Acanthodactylus erythrurus</i>	Spiny-footed Lizard		LC	Native
Reptilia	<i>Psammodromus algirus</i>	Large Psammodromus		LC	Native
Reptilia	<i>Lissotriton boscai</i>	Bosca's Newt		LC	Endemic
Aves	<i>Delichon urbicum</i>	Western House Martin		LC	Native
Amphibia	<i>Pelophylax perezi</i>	Iberian Green Frog		LC	Native
Aves	<i>Parus major</i>	Great Tit		LC	Native
Insecta	<i>Euphydryas aurinia</i>	Marsh Fritillary			Native

** Global status of the IUCN Red List: (E) Extinct, (EW) Extinct in the wild, Collapsed, (CR) Critically Endangered, (EN) Endangered, (VU) Vulnerable, (NT) Near Threatened, (LC) Least Concern, (DD) Data Deficient, (NE) Not Evaluated.





CONCLUSIONS

- a) The project falls into the forest management category, aligning with the criteria established by the aOCP Program.
- b) Activities began in January 2023 and were completed by May 2023, meeting the requirement that projects be no more than five years old at the time of this alignment assessment.
- c) The 19 species used for reforestation—including *Quercus pyrenaica*, *Castanea sativa*, *Lavandula stoechas*, and others—are native to Spain and ecologically appropriate for the Mediterranean environment, supporting biodiversity and climate resilience. The project area has not been deforested in the last two years and has instead undergone natural regeneration, aligning with the criterion of avoiding environmental and/or ecological damage.
- d) The project area was previously occupied by non-native species (e.g., *Pinus spp.* and *Eucalyptus globulus*) which were removed, and has since been restored using native flora, aligning with the criterion of avoiding environmental and/or ecological harm.
- e) The project area is located within the *Sierra de las Villuercas y Valle del Guadarranque*, a region of high ecological value, but not officially designated as a Protected Natural Area under national law. As such, the project complies with the additionality criterion, provided no restrictions apply from regional protection frameworks.
- f) The project contributes to ecosystem restoration through diverse native species planting and is designed to enhance habitat quality, indicating alignment with biodiversity restoration objectives.
- g) The Project Developer has submitted documentation demonstrating landowner agreement, fulfilling the criterion of not generating social harm.
- h) The activities proposed by the project have strong potential to contribute to biodiversity conservation:
 - o The use of 19 native species supports habitat complexity, while biodiversity outcomes have been quantitatively assessed using the Shannon Index before and after restoration.
- i) The project presents a strong foundation for ecosystem restoration and biodiversity enhancement.
- j) The project may be eligible for registration under **Modality B of the aOCP**, enabling it to proceed to further evaluation for the issuance of **Carbon (VCC), Biodiversity (VBBC), and Water (VWC) credits**.