2025

ALIGNMENT ASSESSMENT

SB-001-14072025 PROVINCE DE GUARCIF, ORIENTAL, MAROC

Guercif Morocco

Samir Benhalima

July 22, 2025

The regenerative
Standard

ALIGNMENT EVALUATION FOR THE PROJECT SUBMITTED BY SAMIR BENHALIMA, "GUERCIF MOROCCO", IDENTIFIED WITH THE UNIQUE CODE SB-001-14072025 PROVINCE DE GUARCIF, ORIENTAL, MAROC.

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 "Samir Benhalima" presented the "Guercif Morocco" 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 real, measurable, permanent and additional manner, while avoiding any harm to ecosystems and/or society.

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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,
- 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 “Guercif Morocco” project is a regenerative agriculture initiative located in Guercif, Oriental, Morocco. Covering 9 hectares, the project aims to diversify agriculture by cultivating olive trees alongside other species, shifting from monoculture to biodiversity-based practices. Activities include planting 3,520 trees across six species—1,400 Moroccan picholine olives, 1,400 Spanish olive trees, 300 almond trees, 200 four-season lemon trees, 200 fig trees, and 20

pomegranate trees—along with one hectare dedicated to seasonal vegetables. A drip irrigation system and rainwater recovery basin are used to conserve water. The project supports five landowners and contributes to economic development, carbon removal, biodiversity enhancement, and water conservation. The project is applying for Carbon (VCC), Water (VWC), and Biodiversity (VBBC) credits.

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

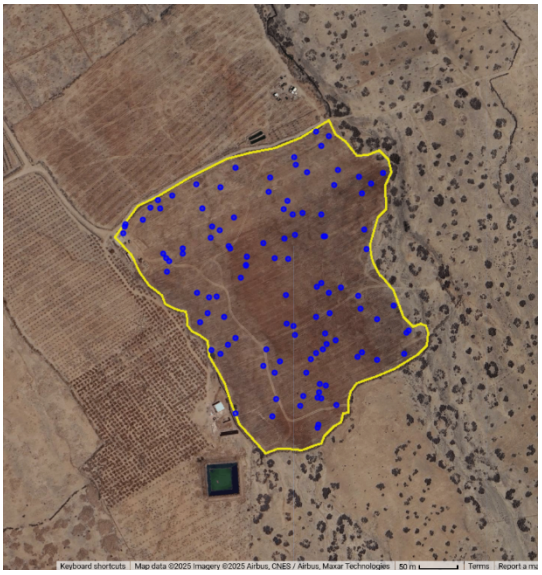

Figure 1. Project area and sampling points used for NDVI analysis.

METHOD OF ANALYSIS

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

Alignment criteria	Y: Yes N: No P: Partially NA: Not applicable	Comments
Does the project belong to one of the following types? • Forest management, including ARR • Regenerative agriculture • Silvopastoral management • Urban forests / individual climate action • Biochar	**Y**	The project falls into the regenerative agriculture 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 began in January 2024.
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 six native species will have positive impacts on 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?	**N**	
For biodiversity restoration credits, the biodiversity integrity indicator is < 80%.	**NA**	
For biodiversity conservation credits, the biodiversity integrity indicator is > 80%.	**Y**	The biodiversity integrity index is 86.007%.

Alignment criteria	Y: Yes N: No P: Partially NA: Not applicable	Comments
Are the proposed keystone species aligned with the aOCP criteria for keystone species?	**NA**	
For carbon credits, what is the value of the ARR Site Suitability Statistic?	**N**	100.0% 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], and the maximum. Boxplots provide information about outliers, data symmetry, the degree of clustering, and whether and how the data are skewed.[1].

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

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 integrity[2]. This information was evaluated through the Orbify platform.

RESULTS

Analysis of Google Earth imagery (Figure 2) shows that while vegetation cover remained relatively unchanged between 2019 and 2023, the broader landscape experienced significant transformation. Around the project site, new buildings and more developed roads are evident. Within the project area itself, the presence of visible lines in the 2023 image suggests land preparation or tilling activities. Although the dominant vegetation types are not clearly distinguishable in either image, it is apparent that groundwork has taken place. It is also important to note that the 2023 image predates the official start of the project by about a year. A more detailed assessment of vegetation dynamics is provided in the NDVI analysis (Figure 3).

July 2019	July 2023
	

Figure 2. Google Earth images of the Project area from 2019 and 2023.

[2]Hill, 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.

The NDVI analysis from 2019 to 2025 (Figure 3) shows relatively stable but low NDVI values from 2019 through late 2023, with most NDVI values fluctuating around 0.2 and minimal long-term upward trends. However, a noticeable increase in NDVI values begins in early 2024, suggesting a potential improvement in vegetation health or cover. This increase in NDVI aligns with the reported start of planting activities in early 2024. Despite variations in monthly rainfall over the years, NDVI remained relatively constant until the recent rise in 2024, indicating that the observed improvement in NDVI is likely directly linked to project interventions.

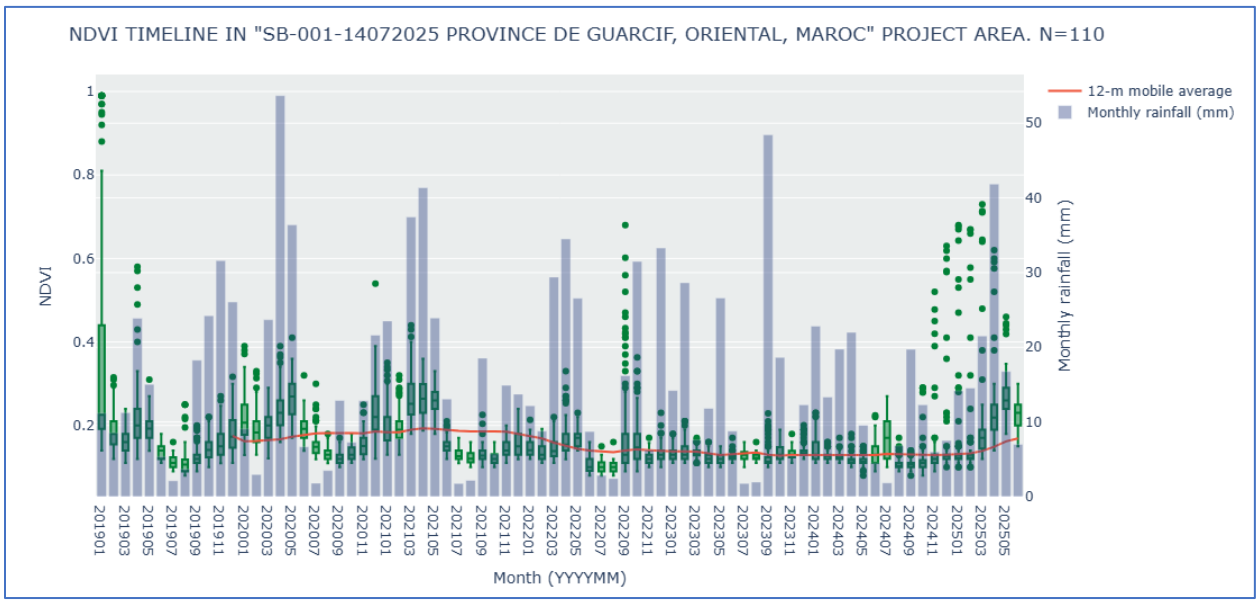

Figure 3. Monthly NDVI and precipitation from January 2019 to June 2025

Biodiversity integrity decreased from 90.139% in 2017 to 86.007% in 2020 (Figure 4). While this represents a measurable decline, the integrity level remains within a range consistent with overarching biodiversity conservation objectives.

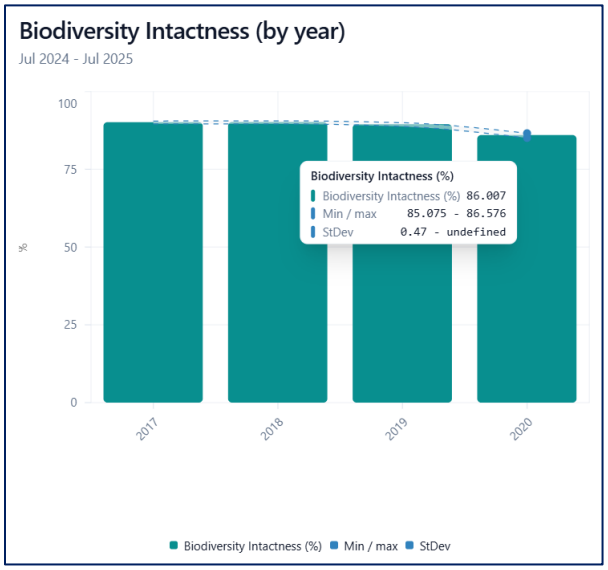

Figure 4. Biodiversity integrity

The biodiversity restoration and conservation strategy of the "Guercif Morocco" project focuses on transitioning from monoculture to a diversified agroecosystem by integrating six different fruit tree species—olive (Moroccan and Spanish varieties), almond, fig, lemon, and pomegranate—across 9 hectares. This approach enhances local biodiversity, promotes habitat heterogeneity, and supports pollinator presence. The project avoids soil degradation and the conversion of high-conservation-value habitats, ensures minimal water consumption through drip irrigation and rainwater harvesting, and excludes chemical-intensive practices. By prioritizing ecological balance and sustainable land use, the strategy aims to create a resilient landscape that contributes to long-term biodiversity conservation while supporting local livelihoods.

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 Morocco
Fauna					
Aves	***Pyrrhocorax pyrrhocorax***	Red-billed Chough		**LC**	**Native**
Aves	***Lanius senator***	Woodchat Shrike		**NT**	**Native**

Class	Scientific name	Common name	National status*	World Status**	Distribution Morocco
Reptilia	***Discoglossus pictus***	Mediterranean Painted Frog		**LC**	**Native**
Reptilia	***Natrix maura***	Viperine Snake		**LC**	**Native**
Reptilia	***Chalcides minutus***	Small Three-toed Skink		**VU**	
Mammalia	***Pipistrellus pipistrellus***	Common Pipistrelle		**LC**	**Native**
Reptilia	***Scelarcis perspicillata***	Moroccan Rock Lizard		**LC**	**Native**
Amphibia	***Pelophylax saharicus***	Sahara Frog		**LC**	**Native**
Flora					
Magnoliopsida	***Nerium oleander***	Oleander		**LC**	
Magnoliopsida	***Peganum harmala***	Harmel		**DD**	
Magnoliopsida	***Pistacia atlantica***	Mount Atlas Mastic Tree		**NT**	

*** National status:** https://www.inaturalist.org/check_lists/7653-Morocco-Check-List

**** 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 regenerative agriculture category with a focus on diversifying the agroecosystem, aligning with the criteria established by the aOCP Program.
b) Activities began in January 2024, which meets the requirement that projects be no more than five years old at the time of this alignment assessment.
c) The six species used for reforestation are native and/or ecologically appropriate for the region, supporting restoration and biodiversity goals. Additionally, 11 species of fauna and four species of flora, either native or registered as an “at-risk” species were documented within the project area.
d) The project area has not been subject to deforestation in the last two years, aligning with the criterion of avoiding environmental degradation.
e) The project area is not located within a legally designated Protected Natural Area, which complies with the additionality criterion.
f) Biodiversity intactness is 86.007%, aligning with biodiversity conservation objectives.
g) The Project Developer has submitted documentation proving land ownership and an agreement with local communities, which fulfills the criterion of not generating social harm.

h) The activities proposed by the project have strong potential to contribute to biodiversity conservation:
    - The project incorporates a diverse mix of fruit tree species and avoids monoculture practices, helping to restore ecological function, improve habitat heterogeneity, and create conditions conducive to the return of native fauna.

i) The project presents a sound foundation for ecosystem and biodiversity restoration. The project may be eligible for registration under **Modality B of the aOCP**, allowing it to advance in the evaluation process for the generation of Carbon (VCC), Biodiversity (VBBC) and, Water (VWC) credits.
    - **Please provide a clear geolocation of project activities and intended zones for species-specific replantation.**