

Biodiversity Challenge Funds Projects Darwin Initiative, Illegal Wildlife Trade Challenge Fund, and Darwin Plus

Half Year Report

It is expected that this report will be a **maximum of 2-3 pages** in length.

If there is any confidential information within the report that you do not wish to be shared on our website, please ensure you clearly highlight this.

Submission Deadline: 31st October 2024

Submit to: BCF-Reports@niras.com including your project ref in the subject line.

Project reference	31-011
Project title	Coffee for nature: Restoring Nicaraguan biodiversity through coffee agroforestry
Country(ies)/territory(ies)	Nicaragua
Lead Organisation	ECOM Agroindustrial Corp. Limited
Partner(s)	The Cornell Lab of Ornithology
Project leader	<i>Edgardo Alpizar</i>
Report date and number	October 25 th 2024 / HYR-1
Project website/blog/social media	n/d

1. Outline progress over the last 6 months (April – September) against the agreed project implementation timetable (if your project started less than 6 months ago, please report on the period since start up to end of September).

Use of the Biodiversity Progress Index (BPI) to estimate and study biodiversity.

The BPI leverages high-quality data stored on the eBird platform (collected through citizen science), and analysed using innovative artificial intelligence techniques and technologies to estimate species richness, relative abundance and integrity of bird communities. We use “biodiversity completeness” (i.e. the proportion of bird diversity from the total diversity that should exist in an area) as the guiding measure for decision making and future monitoring (see Figure 1). The BPI uses both species and community level metrics that can be used to evaluate biodiversity status of areas of interest (e.g. individual farms, watershed, project area); their performance when compared to each other or against their surrounding landscapes, and to nearby protected areas; or to explore changes through time with repeated measurements.

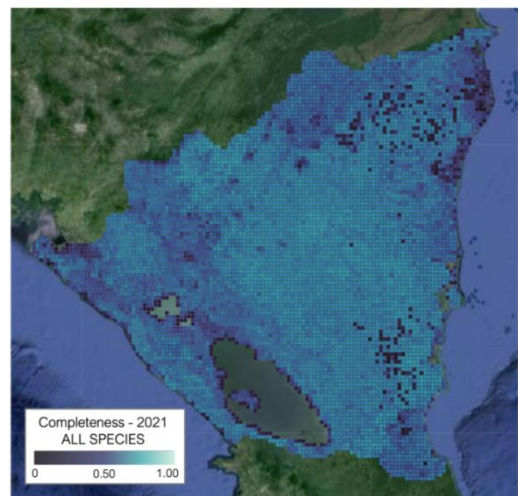


Figure 1: Year-round maximum avian community completeness for all avian species in Nicaragua, evaluated using eBird data, and based on the environmental conditions in 2021.

The BPI's ability to measure and communicate the impact of regenerative and restorative practices on biodiversity at all scales makes it a cost-effective and reliable tool for establishing biodiversity baselines and routinely measuring farm or landscape performance.

Methodology for zone selection.

Landscape selection in Nicaragua was done in two steps. We used watersheds as the first selection unit and summarized all datasets within the extent of each watershed. As a first step, we summarized the mean and standard deviation of community completeness (native spatial resolution of 3km x 3km) in each watershed (See Figure 2b). We then applied a filter to identify and retain only the watersheds with a mean completeness below the 50th quantile and standard deviation between the 20th and 80th quantiles (see Figure 2C). These identified potential watersheds (i.e., landscapes) of interest as those with lower completeness and intermediate variation. Watersheds with lower mean completeness are those where additional investments or conservation/restoration actions would be beneficial and provide a higher potential return on investment. We chose to focus on watersheds with intermediate amounts of variation in completeness because those watersheds have areas of both high and low completeness, meaning that any investments or actions taken would likely benefit from the surrounding landscape.

After filtering to the watersheds that fit our initial criteria, we used finer-scale information on tree coverage, canopy height, and elevation to identify potential areas of interest within each watershed. We were looking for watersheds with a mix of forested and non-forested areas (mix of low and high mean tree coverage values and canopy height) and at an elevational range that is suitable for coffee. Completeness cell values (3km by 3km) were additionally used to identify the areas with low completeness of all species and regional species of conservation concern, more specifically, within each watershed.

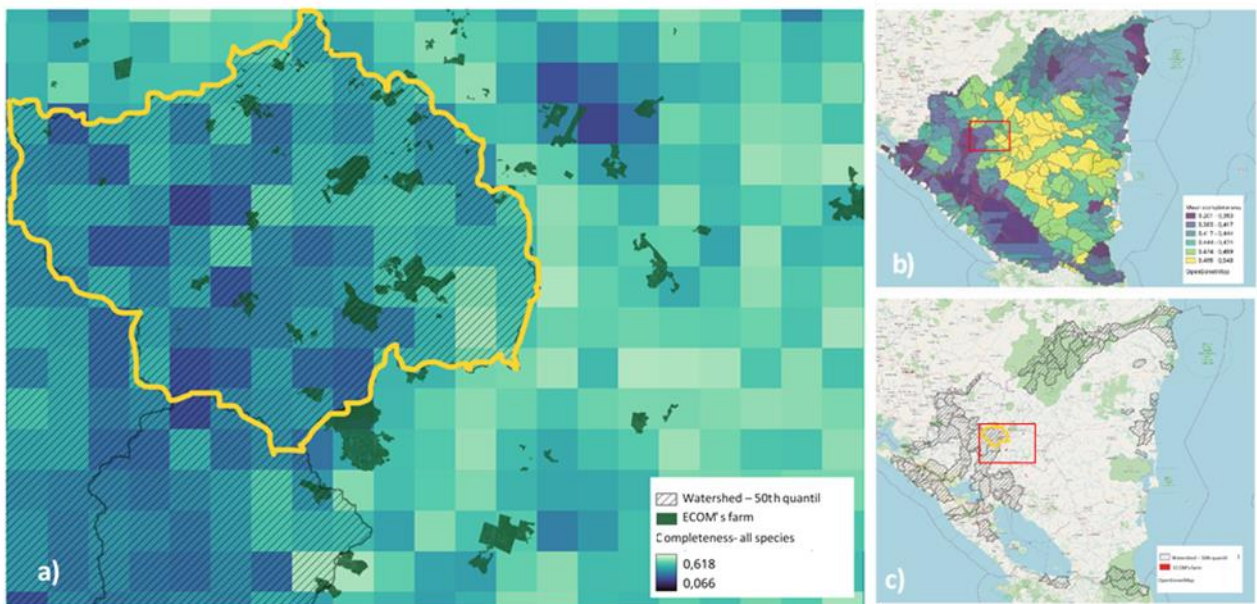


Figure 2: Pre-selection of area at the watershed level for implementation of the DIR30S2\1058 project. a) The preselected watershed is shown in yellow at a resolution of 3 x 3 km per cell, b) Mean completeness for all level 8 watersheds, and c) Watersheds selected for their high value for money restoration potential.

The preselected basin has an area of 839.98 km², in which there are three protected areas (RN Cerro frio La Cumpulida, RN Cerro Arenal and RN Cerro Datanli-EI Diablo) located in the central and southern part of the watershed; These areas are important for water recharge and for conserving endangered species.

General criteria for selecting this area:

1. The project will be implemented outside the protected areas to guarantee legality in land ownership.

2. Despite the protected areas, this basin presents low completeness in biodiversity (shown with the darker pixels in figure 2a).
3. There is a good presence of ECOM in the area, therefore, it guarantees a good supply chain for implementation and monitoring.

Next steps:

2. Output: Develop a practitioner and decision-maker guide to biodiversity restoration conservation in Nicaragua including: areas for intervention with highest potential for impact, plot to landscape level implementation recommendations and presented this report to key national stakeholders.
 - 2.1. Create maps of species- and community-level biodiversity metrics for Nicaragua; identify areas with the highest potential return on investment for biodiversity.
 - 2.2. Design and approval of the guide for decision-makers.
3. Output
 - 3.1. In-situ recognition and selection of restoration priority areas

Formation of work team

By ECOM

Highly qualified personnel, infrastructure and means have been allocated to implement agroforestry systems and monitoring. In addition, it has a nursery that applies innovative technologies for the reproduction of high-quality coffee and forestry vegetative material.

By CLO

A team of multidisciplinary experts with exceptional skills has been formed to guarantee high reliability of the information collected in the baseline. To do this, the standardized PROALAS protocol will be applied for the subsequent analysis of integrity and abundance of bird communities using the BPI.

2. Give details of any notable problems or unexpected developments/lessons learnt that the project has encountered over the last 6 months. Explain what impact these could have on the project and whether the changes will affect the budget and timetable of project activities.

During the quarter, there have been no problems affecting the development of the project and no impacts on the budget or schedule of activities are foreseen.

3. Have any of these issues been discussed with NIRAS and if so, have changes been made to the original agreement?

Discussed with NIRAS:	No
Formal Change Request submitted:	No
Received confirmation of change acceptance:	No
Change Request reference if known: -	

4a. Please confirm your actual spend in this financial year to date (i.e. from 1 April 2024 – 30 September 2024)

Actual spend: £ ██████

4b. Do you currently expect to have any significant (e.g. more than £5,000) underspend in your budget for this financial year (ending 31 March 2025)?

Yes No Estimated underspend: £ ██████

4c. If you expect and underspend, then you should consider your project budget needs carefully.

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5. Are there any other issues you wish to raise relating to the project or to BCF management, monitoring, or financial procedures?

The funds corresponding to the second quarter were executed in the third quarter; therefore, no expenditures are recorded in this report until September 30, 2024.

6. Please use this section to respond to any feedback provided when your project was confirmed, or from your most recent annual report.

NIRAS requested to ECOM a standalone safeguarding/PSEAH policy within the half year report.

ECOM shared such SEAH Policy on September 20th including reference to harassment (of any kind) against minors inside or outside of a work setting.

Checklist for submission

For New Projects (i.e. starting after 1st April 2024)	
Have you responded to any additional feedback (other than caveats) received in the letter you received to say your application was successful which requested response at HYR (including safeguarding points)? You should respond in section 6, annexes other requested materials as appropriate.	✓
If not already submitted, have you attached your risk register ?	
For Existing Projects (i.e. started before 1st April 2024)	
Have you responded to feedback from your latest Annual Report Review ? You should respond in section 6, annexes other requested materials as appropriate.	
For All Projects	
Include your project reference in the subject line of submission email.	✓
Submit to BCFs-Report@niras.com .	✓
Have you clearly highlighted any confidential information within the report that you do not wish to be shared on our website?	
Have you reported against the most up to date information for your project ?	✓
Please ensure claim forms and other communications for your project are not included with this report.	✓