

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

Please note all projects that were active before 1 October 2024 are required to complete a Half Year Report.

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

Project reference	30-015
Project title	Protecting Biodiversity by improving community wellbeing in Southeast Madagascar
Country(ies)/territory(ies)	Madagascar
Lead Organisation	Health In Harmony (HIH)
Partner(s)	Madagascar Biodiversity Center (MBC)
Project leader	<i>Dr Sakib Burza</i>
Report date and number (e.g. HYR1)	<i>HYR2</i>
Project website/blog/social media	www.healthinharmony.org

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).

Although we are not looking for specific reporting against your indicators, please use this opportunity to consider the appropriateness of your M&E systems (are your indicators still relevant, can you report against any Standard Indicators, do your assumptions still hold true?). The guidance can be found on the resources page of the relevant fund website.

Over the past six months, significant progress has been made across all project outputs, closely adhering to the implementation timetable. Under **Output 1**, 20 hectares of native forest were reforested by June 2024, achieving an impressive 80% seedling survival rate through appropriate adapted planting techniques, including 40cm cavity creation. A total of 20,825 seeds and seedlings were transported to various planting sites during this period. Community involvement has been robust, with two reforestation staff from Health In Harmony (HIH), two regional ministry staff, and 130 community members participating in monitoring and planting activities. Firebreak construction and maintenance were prioritised to protect reforested areas, with 2 km of firebreaks maintained in June and new firebreaks of 3 km and 6 km constructed in August and September, respectively, totalling 11 km.

For **Output 2**, the cricket frass fertiliser (CFF) trials progressed with the completion of initial activities, including identifying the scientific team and obtaining necessary permissions. Experimental plots were established in Tsaratanàna (coastal) and Namohora (inland). Soil preparation was carried out for seven different treatments, including controls and various fertiliser combinations such as cattle manure (CM), NPK fertiliser, and different dosages of CFF. Preliminary findings indicate that treatments combining CFF with CM and NPK fertilisers yielded the

highest biomass and fruit production. However, excessive CFF reduced productivity in some crops, and optimal fertiliser treatments varied by site and crop type, suggesting the need for customised applications based on local conditions. Data analysis is ongoing.

In **Output 3**, acceptability surveying of cricket powder-based nutritional supplements was completed following ethical approval led by independent social scientist Dr. Voni. Three Black Soldier Fly (BSF) products—crackers, powder, and fresh larvae—were selected for testing. Community engagement was high, with surveys conducted among 140 adults (56% women) and 64 children across seven villages. Results showed that 90% of participants were willing to consume BSF products daily, with 64.3% wishing to produce BSF themselves. The manuscript is being prepared for publication, and the results guided the identification of villages and approaches for the insect farms in Output 4.

Under **Output 4**, 32 farms were set up across six villages between July and August, and community-based insect product cuisine workshops were initiated. The farms are monitored biweekly for production quality, challenges, and participant engagement. Expansion plans are underway to reach additional communities by mid-2025.

For **Output 5**, agroforestry implementation has been successful, with 5 hectares of land converted to agroforestry in March 2024 involving 691 participants (58% women) and an additional 4 hectares in July with 85 participants (57% women). Community training sessions were held in March and July, training 167 community members in agroforestry techniques. Monitoring efforts showed a 90% survival rate of planted seedlings.

2. Give details of any notable problems or unexpected developments/lessons learnt 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.

Two significant challenges were encountered during this period. First, in the fertiliser trials under **Output 2**, a fungal outbreak destroyed all bean seedlings immediately after germination, necessitating two replanting efforts and causing delays in data collection. Beans are an essential protein source and a vital component of the study. Seeds were treated with antifungal pesticides to mitigate the issue, and the experimental protocol was adjusted to include disease management practices. This led to increased costs due to additional seeds and treatments but allowed the study to proceed without significant deviation from the schedule.

Second, flooding at the Tsaratanàna coastal site caused fertiliser mixing across different treatment plots and resulted in plant loss, compromising the integrity of treatment comparisons. The flood delayed data collection and affected the validity of data from the coastal site. Protective measures were implemented to prevent future flooding impacts, and monitoring frequency was increased to promptly identify and address environmental issues. These challenges underscored the need for thorough risk assessments of experimental sites and the incorporation of contingency plans for environmental events.

Finally, as reported just after the last report, there was a quality issue with the insect product to be used for the acceptability study. This was comprehensively investigated, and the source of the problem was identified. This contributed to a delay in conducting the acceptability study, which has now been completed with a delay of approximately three months. However, it has no material impact on the outcomes since the data was available for critical decisions to be made for the insect farms.

Adjustments for future activities involve enhanced monitoring, increased preventive measures against disease and environmental impacts, and customised approaches based on site-specific conditions.

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

Discussed with NIRAS:	<u>Yes</u> / No
Formal Change Request submitted:	Yes/ <u>No</u>
Received confirmation of change acceptance:	Yes/ <u>No</u>

Change Request reference if known: *If you submitted a financial Change Request, you can find the reference in the email from NIRAS confirming the outcome*

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**

4c. If you expect and underspend, then you should consider your project budget needs carefully. Please remember that any funds agreed for this financial year are only available to the project in this financial year.

If you anticipate a significant underspend because of justifiable changes within the project, please submit a re-budget Change Request as soon as possible. There is no guarantee that Defra will agree a re-budget so please ensure you have enough time to make appropriate changes to your project if necessary. **Please DO NOT send these in the same email as your report.**

NB: if you expect an underspend, do not claim anything more than you expect to spend this financial year.

5. Are there any other issues you wish to raise relating to the project or to BCF management, monitoring, or financial procedures? No

6. Please use this section to respond to any feedback provided when your project was confirmed, or from your most recent annual report. If your project was subject to an Overseas Security and Justice Assistance assessment please use this space to comment on any changes to international human rights risks, and to address any additional mitigations outlined in your offer letters. Please provide the comment and then your response. If you have already provided a response, please confirm when.

Consumption of Insect Powder (Output Indicator 4.4)

Feedback: "Output Indicator 4.4 notes: Over 75% of beneficiary population of each farm consumes pre-defined amount of insect powder daily by start of Year Two."

Response: The initial 30 community farms began operations recently, and the first insect harvest has just been completed. Consumption data is not yet available but will be provided in the next report. The acceptability survey indicated that 90% of adults are willing to include BSF powder in at least one daily dish.

Procurement of Three Insect Products (Activity 3.2)

Feedback: "Page 5 of the Annual Report notes procurement of the 3 insect products for testing (Activity 3.2) should be completed by April 2024 for transportation to Farafangana in Q1, Year 2. Given the importance of this acceptability of this trial and the two-year overall duration, a short Half Year Report update is requested."

Response: The three insect products—powder, crackers, and dry larvae—were transported to Farafangana in July 2024 for the acceptability survey. The delay was due to production issues outside HHH's control, which were reported to Darwin immediately after the last report was submitted.

Agroforestry Planting Targets (Output 5)

Feedback: "Output 5 states that with a baseline of 9.41 hectares of agroforestry, HHH plans to reforest 19.41 hectares of agroforestry by project end, amounting to ten hectares planted in the project period. In Year 1, the project planted 20 hectares of agroforestry (Indicator 5.1). What is the revised total number for the end of Year 2?"

Response: We exceeded our original goal by planting 20 hectares in Year 1. The final total will depend on upcoming yield analyses. We aim to maximise agroforestry achieved through this grant and will provide updated figures in the next report.

Measurement of Malnutrition Reduction

Feedback: "It is not clear in the Annual Report how the malnutrition reduction measurement will work."

Response: We monitor childhood malnutrition using Mid-Upper Arm Circumference (MUAC) measurements for children aged 6 months to 5 years. We will track malnutrition prevalence over the grant period and report findings.

Firebreak Monitoring (Activity 1.5)

Feedback: "Firebreak/firewall maintenance through clearing it from any biomass that can fuel the wildfire although it was not noted whether there has been monthly monitoring of the firebreaks, per the grant application"

Response: We conduct monthly monitoring to ensure firebreaks are functional and six-monthly maintenance to clear potential fuel materials.

Ethical Review Delay

Feedback: "One noted delay involved the second insect powder Acceptability Study (Output 3) application to the Ethical Review Board, which was initially denied because it was deemed the study was a better fit for a different

review board"

Response: Approval has been obtained from the appropriate national Ethical Review Board (CMEST) after initial misdirection.

Acceptability Study Delay

Feedback: *"The study has been severely delayed, but the project asserts that it will still be possible by the end of the project."*

Response: The acceptability study was conducted in July–August 2024 after a three-month delay. Using the results, 30 insect farms were established, and the first harvest occurred in October 2024. Manuscript preparation is underway.

Reforestation Baseline Confusion (Output 1)

Feedback: *"The project has used a confusing approach to numbers for baseline and indicators of Output 1 progress."*

Response: We agree to focus on the additional hectares planted during this grant—20 hectares of reforestation and 10 hectares of agroforestry—and will provide accurate data in the next report.

Malnutrition Baseline (Outcome Indicator 0.6)

Feedback: *"The Annual Report does not comment on the number of communities involved."*

Response: We will provide baseline malnutrition data; the estimated prevalence is 7.3%. Anthropometric monitoring will continue to assess changes.

Prioritisation of Women in Insect Farms (Indicator 4.1)

Feedback: *"Women will be prioritized as managers of insect farms... Detail is required on how and on what basis that prioritisation will take place – to what extent are the best candidates being selected? - and how that approach will not demotivate men, who may be equally or better qualified and whose local support the project also needs."*

Response: We are ensuring at least 50% female participation by inviting both men and women to training and farming activities, promoting shared responsibility without demotivating any group.

CommCare Implementation

Feedback: *"HIH asserts that CommCare will enable clearer data intersection... It would be useful to have any such improvements that are noted evidenced in the next Annual Review."*

Response: CommCare is operational, enhancing data collection by health and forest guardians. We will provide evidence of improvements in the next annual report.

Community Engagement in Frass Study

Feedback: *"One interesting lesson to note: despite the use of Radical Learning, the value of this intensive local community engagement did not appear to spread to the study of using insect frass as fertiliser (Output 2)."*

Response: We have engaged communities in frass fertiliser experiments using their fields. Updates will be provided in the next review.

Increasing Darwin Initiative Visibility

Feedback: *"A concerted effort should be put into increasing visibility on all channels available to HIH."*

Response: We are enhancing visibility through planned communications, including blog posts, social media, and scientific publications highlighting project successes.

Community Awareness of Right to Complain

Feedback: *"It would be useful to receive an update from HIH about whether communities with which the project engages are aware of their right to complain."*

Response: Communities are aware of their right to voice concerns through our regular Radical Listening sessions, which facilitate open feedback and collaborative problem-solving.

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.	X
For All Projects	
Include your project reference in the subject line of submission email.	X
Submit to BCFs-Report@niras.com .	X

Have you clearly highlighted any confidential information within the report that you do not wish to be shared on our website?	N/A
Have you reported against the most up to date information for your project?	X
Please ensure claim forms and other communications for your project are not included with this report.	X