

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

Project reference	30-014
Project title	Community-based agrobiodiversity systems for improved livelihoods and climate resilience
Country(ies)/territory(ies)	Guatemala, Honduras, Nicaragua, Costa Rica
Lead Organisation	The Development Fund, Norway
Partner(s)	Association of Cuchumatanes Organizations (ASOCUCH); Foundation for Participatory Research with Farmers of Honduras (FIPAH); Federation of Cooperatives for Development, R.L., Nicaragua (FECODESA R.L) and University of Costa Rica (UCR), Fabio Baudrit Moreno Agricultural Experimental Station.
Project leader	Elin Cecilie Ranum, The Development Fund
Report date and number (e.g. HYR1)	1 April 2023 to 30 September 2024, Half Year Report 2 (HYR2)
Project website/blog/social media	https://www.facebook.com/share/p/DD1TMvGBrvxFN4MG/ https://www.facebook.com/share/p/1nG4G7XmpMkADFwZ/ https://www.facebook.com/share/p/ELsEChz1q97HCrVB/?mib extid=WC7FNe https://www.facebook.com/share/p/VxapgjswQoDJYByy/?mibe xtid=WC7FNe https://www.facebook.com/share/p/NEG2nmWDh25SyvvS/

1. Outline progress over the last 6 months (April – September) against the agreed project implementation timetable

Output Level 1: Developed varieties through Participatory Plant Breeding approaches adapted to the effects of climate change.

<u>Activity 1.1.</u> In Honduras, Nicaragua and Costa Rica 20 bean trials were established and monitored. With these processes it is expected to select the best bean variety to be released locally.

<u>Activity 1.2.</u> In Honduras inputs, tools, and equipment for the bean introgression process were delivered to PIF Zamorano to support the bean and maize trials. A total of 160 pounds of registered bean seed has been received which will be used for multiplication and regeneration. In Nicaragua, crossbreeding processes were carried out in the fields of increase of the native bean varieties and ERTEA line with greater potential, in order to have greater diversity.

<u>Activity 1.3.</u> The organizations have continued with the work of developing new varieties of maize with tolerance to drought and the diseases ear rot and "asphalt stain". In Guatemala, 6 trials have been established to evaluate asphalt stain-tolerant materials from FIPAH Honduras, evaluated under different altitudinal strata. To date, 3 locations have been harvested, obtaining good expectations of yield and adaptability in rainy seasons. Similar activities have been carried out in Honduras and Nicaragua during the period.

<u>Activity 1.4.</u> The work of producing and distributing seeds of locally adapted maize and bean varieties has continued. In the four counties, 970 seed packets were distributed to 710 families.

<u>Activity 1.5.</u> During the period, 290 farmers in Honduras, Nicaragua and Costa Rica received training in participatory plant breeding, seed production and in situ conservation of wild relatives.

<u>Activity 1.6.</u> In the four countries, a total of 9 field days that involved 193 persons were carried out during the period.

<u>Activity 1.8.</u> In Nicaragua, a catalogue was prepared based on the morphological characterization of 60 bean varieties using the bean descriptors manual developed by the Collaborative Program for Participatory Plant Breeding in Mesoamerica (FPMA) and is currently in the process of being edited for publication. In Costa Rica, there is a first draft of a catalogue of the varieties resulting from participatory plant breeding.

Output Level 2: Strengthen collaboration between local seed banks and national gene banks in the region.

<u>Activity 2.1.</u> The project provided technical assistance to 6 community seedbanks in Guatemala and 3 in Nicaragua, with a focus on enhancing their infrastructure and equipment. In Guatemala, an exchange of 16 community seed banks was carried out in the region Cuchumatanes, with the participation of 82 persons, where a new strategy was proposed.

<u>Activity 2.2 and 2.3</u> The organisation of 8 agrobiodiversity fairs (Guatemala 1, Nicaragua 4, Honduras 1, and Costa Rica 2) facilitated knowledge exchange among 890 farmers, promoting the use of locally adapted varieties. 397 farmers participated in training on farmers' rights within the framework of the International Treaty on Plant Genetic resources for Food and Agriculture (ITPGRFA).

<u>Activity 2.4.</u> In Guatemala, a collection of 7 varieties of maize of the *imbrincada* race was realized. In Honduras, in collaboration with the CURLA germplasm bank, an incremental field of two native populations of maize (early red and black) was established, and it is expected to have seed availability for subsequent phenotypic characterization. In Nicaragua, a field was established to increase seeds of 80 native varieties of beans, and 20 varieties of beans and 3 varieties of maize were collected. In Costa Rica, the process of increase, characterization, drying and germination tests of 120 accessions of native beans was carried out for shipment to international banks.

<u>Activity 2.5.</u> In Costa Rica, a total of 50 native bean accessions are ready for shipment to Svalbard, Norway, all vacuum-packed in a three-layer aluminium bag. The shipment is expected to be made in the first week of October. This is a joint result with a project funded by the Crop Trust in Germany.

Output Level 3: Collection and regeneration of accessions of wild relatives of Phaseolus <u>Activity 3.2.</u> In Guatemala, exploratory tours have been carried out for the collection of live specimens of wild bean materials. In Honduras, Costa Rica and Nicaragua, planning processes have begun for upcoming introspections in search of accessions of wild bean relatives.

<u>Activity 3.3.</u> In Guatemala, the identification of wild bean species established as seed production trials has been realizes, with the aim of having seeds of each material and achieving the process of regeneration and protection in the National Germplasm Bank. A germination percentage of 90% and adaptability of 85% of the materials have been recorded, these are still in the vegetative phase waiting to obtain seed at the beginning of 2025, from at least 9 accessions.

<u>Activity 3.4.</u> In Guatemala coordination has been made so that in the next quarter the first delivery of live specimens of wild relatives of beans to the national herbariums will be realized. The 3 materials have been identified with the support of professors from the University of San Carlos de Guatemala. In Honduras, a copy of the collection carried out at the end of the first year of the project of two wild relatives of beans was delivered to the Zamorano herbarium, with their respective identification documentation.

<u>Activity 3.5.</u> In Nicaragua, efforts have been made with INTA, MAG and the municipal mayor's office of Pueblo Nuevo to declare the areas where wild bean specimens were located as protected areas. This is an ongoing process, so far there is no final resolution.

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.

Bureaucratic challenges in Nicaragua and Costa Rica did pose an immediate risk to achieve project results. These challenges have been discussed with NIRAS and the challenges have now been resolved, please see comments in the project risk register ("Issue Register").

Climate variability at the regional level has presented floods in some places and droughts in others, as well as intense rains in short periods. Farmers in Honduras reported a high incidence of *Megalurotrips usitatus*, which affected bean cultivation in the months of June and July, causing significant losses and a negative impact on the project's research and seed production activities.

The genetic erosion of wild materials is also a limitation. Wild materials are increasingly scarce and found under uncommon habitat/times.

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

Discussed with NIRAS:	Yes	
Formal Change Request submitted:	No	
Received confirmation of change acceptance:	N/A	

Change Request reference if known: N/A

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 x No Estimated underspend: £

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.

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. Please provide the comment and then your response. If you have already provided a response, please confirm when.

The feedback from the first annual report will (as it was requested) be answered in the next annual report.