

Darwin Initiative/Darwin Plus Projects Half Year Report (due 31st October 2021)

Project reference	26-005
Project title	Green Health: improving indigenous participation through the CBD's ABS
Country(ies)/territory(ies)	Guatemala
Lead organisation	UCL
Partner(s)	UVG
Project leader	Michael Heinrich
Report date and number (e.g. HYR1)	HYR3 29 Oct 2021
Project website/blog/social media	https://twitter.com/HealthDarwin

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

1.2 Writing and submission of IRB protocols for UK, Guatemala and Maya Council.

Awaiting official endorsement from UVG after submitting Covid19 changes. The UVG team needed to resubmit twice a change request for research with human participants to incorporate new research protocols as a result of mandatory biosecurity protocols requested by UVG and the Guatemala government

1.4 Steering board meetings are conducted to discuss the development of the framework with all stakeholders (including preparation of materials for discussion)

A meeting with CONAP was held on July 16th about the ABS MAT agreement to review, add or suggest changes to adapt to the specifics of the case and CONAP's specific regulations. A meeting with the European partners was held on August 27th to discuss the general timeline, activities, next steps and project's end dates.

1.5 Conduction of eight TD workshops for discussion and negotiation of components for implementing Addis Ababa's principles and Nagoya.

A workshop was held on July 19th to discuss the ABS MAT agreement with the Q'eqchi' Council, to understand the information written, the monetary and non-monetary benefits, as well as questions that could arise to discuss with the industrial partners during the reading. Another workshop was held on October 1st to discuss the plant nursery and construction of the Popoljay. It is currently still not known if the workshop with all stakeholders for Y3 will be in person or remotely. Given the constraints and the delays that continue due to the past restrictions it is planned to get a change request in order to hold the workshop in March 2022. It is important that at least some stakeholders representing each of the main partners will attend in person.

1.6 Drafting of procedural protocols for inclusive application of Addis Ababa principles in sustainability assessments (NDFs), monitoring and management of medicinal plant resources

We had detailed discussions about the relevance of this task in the context of the developments of the projects, with no species with identified limits in terms of sustainable sourcing being considered at this stage. Also, the completion of this task relied on one expert team member guiding the process. Due to personal circumstances, it has so far not been possible to complete it. Given that AA principles are not a key component to this project, we request this activity be removed, as it will not impact the overall project objective.

1.7 Production and dissemination of procedural tools (manuals and documents) for implementing Guatemala's Nagoya protocol including the proposed ABS pathways for Guatemala and Q'eqchi' participating communities.

Drafting of step-by-step procedural tools has started and is due to be completed by the end of the project. The draft is guided by the experience of the Green Health project combined with the legal and procedural tools for ABS.

2.3 Participatory observation, interviews and focus groups to build up medical case studies.

Currently, 458 patient cases are reported for the cultural epidemiology study, representing seven months of patient treatment by 17 traditional Q'eqchi' healers. In addition, there are 19 approved documented in-depth cases. These have been diagnosed clinically by an MD and treated by traditional healers over a period of 24 months. Due to severe biosecurity COVID-19 restrictions preventing visiting sick patients, enacted since July 30th 2020, it is no longer possible to continue building the cases to 25 in-depth registries.

2.4 Analysis of the ethnomedical and ethnobotanical data to assess how gender, age and socio-cultural background affect access and use of medicinal plants.

A baseline has already been established. The final end-users data will be available by the end of the project. Thanks to the ongoing creation of a dedicated plant nursery, as well as due to the acquisition of a private land to act as medicinal plant reserve for the Council, the number of users in all categories are expected to increase beyond those planned initially.

2.5 At least 90% of plants used by the healers in the medical case studies are collected, deposited and identified at UVG herbarium.

All the plants used by the healers have now been collected and deposited at the Herbarium of UVG. Some have been deemed unidentifiable. Until now among the identifiable ones 75% have been identified to species level.

2.7 Production of maps highlighting areas of medicinal plant diversity, risk assessment and proposed areas for protection

Currently five maps have been completed for the environmental - risk assessment, 1 map with a proposed area for protection [as of July, the area has been bought by the council for the purpose of protecting], a map for another area of protection which is the target of the group's new Darwin project application. The other maps contain information with medicinal plants diversity collection, forest coverage loss and historical forest coverage loss for proposed protection areas, GPS coordinates are available, and maps will be produced.

3.3 Stakeholders meetings/workshops lead by the industrial partners to build a model ABS agreement

Following discussions during the previous TD workshop (Dec 2020), the Council, CONAP and UVG Team have made written comments and raised questions on the proposed model ABS agreement which are currently being addressed by the industrial partner, so to establish better clarity and suggest changes which can be discussed in the next general TD workshop scheduled for later this year.

3.4 Workshops to present the model agreement to the broader indigenous groups to facilitate consensus and agreement on potential pathways to benefits.

The situation around ABS and Nagoya Protocol issues in Guatemala has not changed from what mentioned in the Y2 report. We will follow up in the Change Request form which is being drafted for submission in early November

3.5 Stakeholders' meetings to discuss examples of non-monetary benefits of interest to the communities involved or propose new ones.

As mentioned in the Y2 report, the non-monetary benefits were discussed in the last TD workshop (Dec 2020) in the form of a local medicinal garden (and seed repository) to be led and managed by their community and settled on July 19th 2021. This garden and its facilities are currently being prepared.

4.3 Creation of medicinal plant gardens and seed repository (following technical assessment of the areas, suggested by ACGERS, and adaptation needs for reproduction of selected species).

A nursery has been established in the Council's area and seeds are collected for the repository and sowing calendar for the next growing cycle.

4.4 Planting of selected species in the gardens and disseminated via seed and seedling exchange (based on the assessment in 2)

The plants are growing in the nursery and will be transplanted when they are ready, according to their growth times. The first planting session took place in September 2021, where tree seedlings were taken to the land bought by the ACGERS Council for planting, as part of their plan to recuperate and protect key species.

4.5 Organization, training and supervision of women that will be tending/managing the garden.

As mentioned in the Y2 report, the women have been trained but at the moment the two main managers are men, since women get more involved during the planting of seedlings in the nursery and less during the production cycle. There is a draft plan to introduce more managers, including women, throughout all the nursery's cycle.

4.6 Meetings for the identification of biodiversity-rich areas (including key medicinal plants) that could be targeted for protection (GIS mapping).

Two meetings with the Municipal Government of Poptun and one e-meeting with CONAP were held to negotiate the creation of a medicinal plant-oriented nature reserve, acting as a sanctuary to safeguard key species. To date, a critical route is being prepared to assess the steps and potential financing mechanisms for its creation, including the submission of a Darwin Award in Round 28. The project has successfully identified potential areas for protection of key medicinal species, however it is unlikely the identified ENEA nature reserve can be

completely protected without external funding since the municipal government lacks a revised management plan and corresponding resources for its implementation.

4.7 Discussion with government officials on the feasibility of the creation of protected areas with presentation of mapped areas.

A meeting with the Municipal Government of Poptún has been held to negotiate areas to be improved for protection and the creation of a medicinal plant-oriented nature reserve (target of the group's new Darwin project application). The project was presented, and we received a response to our outline.

5.1 Writing of lay publications regarding process (replication) and outcomes (communities' information process), dissemination in digital and printed forms.

A manual with strategies for the implementation of a local nursery has been drafted and edited to be submitted for publication by November 2021.

5.2 Writing of academic papers.

Our paper 'Green Health in Guatemala - How can we build mutual trust and partnerships for developing local medicines' evidence-base and potential?' is now published and available open access (funded by the UVG) in the *Canadian Science Publishing (CSP) journal Botany*. A paper on ethnobotanical/ pharmacological/ toxicological reports of the plants used by the healers is being drafted and we plan to submit by the end of the project

5.3 Production of videos and dissemination in online-formats.

This activity is still ongoing, footage, scripts and images are available and ready. We plan to finish the videos by the end of the project.

5.4 Conference presentations.

Three separate talks were given by members of the UVG team at the International Transdisciplinary (ITD) Conference 2021 on September 16th and one presentation at the BiologíaUnFuturo conference from UVG on September 23rd. The UK team gave a presentation at the International Society of ethnopharmacology Conference on April 20th, and the project was a core part of the opening plenary lecture given by MH and Caremenza Spadafora (Panama) at the virtual meeting of the Society for Medicinal Plant and Natural Product Research (GA, <https://ga-online.org/ga-congress-2021-a-full-success/>)

2a. Give details of any notable problems or unexpected developments/lessons learnt that the project has encountered over the last 6 months (for COVID-19 specific delays/problems, please use 2b). Explain what impact these could have on the project and whether the changes will affect the budget and timetable of project activities.

The maintenance of the plant nursery requires significantly more work than anticipated. We expected that voluntary shifts would suffice the manual labour needed for its successful upkeep. However, traditional gender roles have made men wary of allowing their wives to work alone in the nursery if they themselves are not involved (specifically because of the long distance from their homes to the nursery). Most families' income strategies depend on daily paid labour elsewhere (usually cattle farms or crops), so the opportunity cost to dedicate their day to unpaid work in the plant nursery is deemed too high. This has resulted in not enough women (or men) able to volunteer work at the garden, requiring the hiring of a specific person so as to not lose all the seedlings. Meetings have been held with the ACGERS Council secretary and other leaders to discuss avenues for sustainability. As a result, in November 2021 a sustainability management plan will be elaborated. It will propose mechanisms to fund partial payment of labour at the nursery, consequently, reducing the opportunity cost and incentivising families to participate more. However, we estimate that for the first year of this nursery, outside resources are needed to secure its existence while the economic sustainability plan offers tangible returns.

Another problem has been the vandalising of the tree nursery, where burglars have tried to break in twice into the tool-shed and office space, succeeding once. This is a problem that will not be solved unless a guardian or alarm system is set in place. However, there is no funding to cover that at present. The Council is taking shifts on a few days to protect the place, but it is not a sustainable solution given there is no comfortable place yet to stay overnight.

2b. Please outline any specific issues which your project has encountered as a result of COVID-19. Where you have adapted your project activities in response to the pandemic, please briefly outline how you have done so here. Explain what residual impact there may be on your project and whether the changes will affect the budget and timetable of project activities.

Towards the end of June 2021 there was a spike in COVID-19 cases that caused rigorous biosecurity protocols to be held by all institutions working on health, including UVG. Several deaths among patients or elders of the ACGERS Council created a halt in patient visits of cases that were being researched for the

in-depth clinical study. Given precarious health conditions and an erratic transportation system, appointments for clinical check-ups with the project's physician were halted, which was a pre-requisite for eligibility of cases for the project. This interruption caused discomfort among healers that kept referring cases to the UVG research team, which in turn caused a reduction in referral cases. An assembly was called by the ACGERS Council where, in joint discussion with UVG, it was agreed to stop the in-depth case reconstruction. So far, we were able to follow 19 cases from their starting point to the closing of their therapeutic process, spanning two years. In July 2021 two members of the UVG team fell ill to COVID-19 during research activities, triggering a red alert for the Unit of Medical Anthropology for mandatory quarantine. Given several deaths within the ACGERS Council have followed in the last months, the case-reconstruction project was stopped definitively. It is not possible to reopen the clinical case reconstructions under current conditions. Since this is a recent development, we are currently developing a change request to be submitted in early November.

2c. Have any of these issues been discussed with LTS International and if so, have changes been made to the original agreement?

Discussed with LTS:	Yes/ <u>No</u>
Formal change request submitted:	Yes/No PENDING
Received confirmation of change acceptance	Yes/ <u>No</u>

3a. Do you currently expect to have any significant (e.g. more than £5,000) underspend in your budget for this year?

Yes No Estimated underspend:

3b. If yes, then you need to 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 rebudget Change Request as soon as possible. There is no guarantee that Defra will agree a rebudget so please ensure you have enough time to make appropriate changes if necessary. Please DO NOT send these in the same email as your report.

4. Are there any other issues you wish to raise relating to the project or to Darwin's management, monitoring, or financial procedures?

NA

If you were asked to provide a response to this year's annual report review with your next half year report, please attach your response to this document.

Please note: Any planned modifications to your project schedule/workplan can be discussed in this report but **should also** be raised with LTS International through a Change Request. **Please DO NOT send these in the same email.**

Please send your **completed report** by email to Darwin-Projects@ltsi.co.uk. The report should be between 2-3 pages maximum. **Please state your project reference number in the header of your email message e.g. Subject: 25-001 Darwin Half Year Report**