Darwin Initiative Innovation: Final Report

To be completed with reference to the "Project Reporting Information Note": (https://www.darwininitiative.org.uk/resources/information-notes/).

It is expected that this report will be a **maximum of 20 pages** in length, excluding annexes.

Submission Deadline: no later than 3 months after agreed end date.

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

Darwin Initiative Project Information

Project reference	**DARNV020**
Project title	**Upscaling innovative 'planting-baskets' to restore landscape diversity, enhancing climate-resilient livelihoods**
Country(ies)	Belize
Lead Organisation	University of Edinburgh (UoE)
Project partner(s)	Belize Botanical Gardens (BBG) Friends for Conservation and Development (FCD) Government of Belize, Forest Department (GoB, FD) Galen University, Belize (GU) International Institute for Environment & Development (IIED) Royal Botanical Gardens Edinburgh (RBGE)
Darwin Initiative grant value	£ 198,896
Start/end dates of project	1 April 2023 – 31 March 2025.
Project Leader's name	Dr Neil Stuart
Project website/blog/social media	https://www.gov.uk/government/news/uk-funds-darwin-initiative-innovation-project-in-belize https://fb.watch/nWjUP9Fcot/. https://www.facebook.com/ukinbelize/videos/658172843131023/ https://www.darwininitiative.org.uk/news/2024/01/27/growing-the-potential-of-planting-baskets/
Report author(s) and date	Rudy Aguilar (BBG), Zoe Goodwin (RBGE), Duncan Macqueen (IIED), Duncan Moss, Neil Stuart (UoE). Additional contributions from Minerva Gonzalez, (Belize Forest Department) and Denaie Swasey, (Galen University).

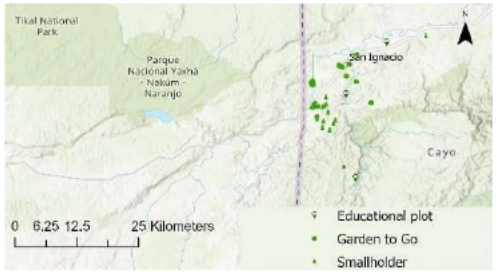
1 Project Summary

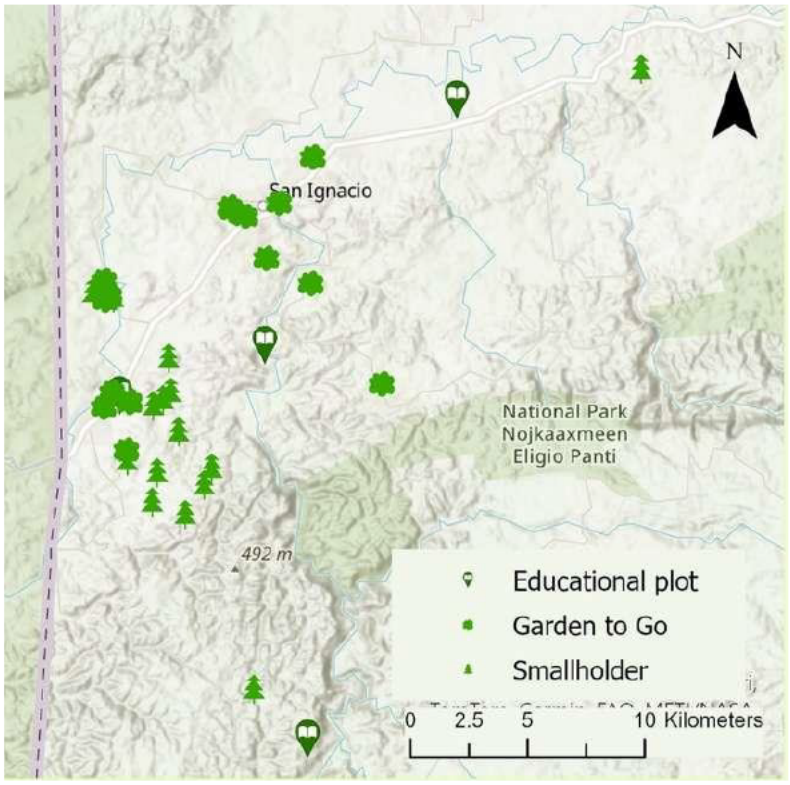
We directly address the challenge of the insufficient understanding and limited resources currently available for supporting smallholder farmers in rural western Belize to transition to more diverse agro-forestry systems. This is important for biodiversity because degradation caused by unsustainable agriculture, and clearing of forested areas for pasture, are the major threats to biodiversity in Belize (DEFRA, 2022). Both are symptoms of the failure of current cropping systems using only a small number of mostly exotic species. We supported subsistence farmers in rural villages of western Belize bordering the Selva Maya biodiversity hotspot, with training and resources to enable them to transition to growing a more diverse set of native food plants, trees and spices. We did this using an innovative approach we termed 'planting baskets'.

Whilst growing native food plants has been tried before in Africa (e.g. BGCI had an innovation project growing native plants in Uganda), each region requires unique solutions. It is novel in Central America, where considerable knowledge has been lost between generations and experimental evidence is limited about which native plants and trees can be propagated and grown successfully in local nurseries or germplasm banks, and which species may be planted together in agro-forestry (AF) systems that enhance biodiversity. Innovation arises from taking the 'planting-basket' concept first developed for food security, adapting this to design more agri-diverse combinations of plants, herbs and spices. We trialled novel planting combinations, creatively intermixing food plants, animals and endangered hardwoods, in bespoke agro-forestry systems that farmers would accept, and which met biodiversity and conservation priorities. We also produced an innovative TV series that promoted the growing of native plants on national TV.

The impetus for this project came from our partners in Belize who witnessed the effects of the pandemic on food security and the rising poverty levels in rural Belize. There was pressure to clear forest for subsistence agriculture because many people had lost their income from regular employment. Whilst the worsening economic situation was driving an increase in deforestation, paradoxically, it also created this opportunity to address some of the root causes of the poverty; tapping into an increased interest in home gardening as smallholders recognised the need to diversify their growing as a strategy to build climate-resilience and broaden their types of income.

The project was implemented in the Cayo District, close to the protected areas of the Selva Maya. by Belize Botanic Gardens (BBG), who carefully screened and recruited equal numbers of land-holding smallholder farmers and landless families willing to experiment growing a wider range of crops on their land and in backyard gardens. From 100 families who showed initial interest in participating, 20 smallholder farming families and 19 landless families were selected. Of these, 15 smallholder and 16 landless families successfully completed the project. BBG also created five demonstration gardens across central Belize. The locations are mapped below and online at [redacted]





The project was located in rural west Belize, between the protected areas of the Selva Maya (Guatemala, Mexico) and the Maya Mountains (Belize). Five educational plots were established at various institutions, demonstrating different examples of agroforestry systems to farmers and agricultural students. The project then provided seedlings and training, enabling 15 smallholder families to establish agroforestry plots on their own farms, and offering seeds, equipment and training so that 16 families without land successfully maintained small backyard ‘Gardens to Go’.

2 Project Partnerships

The demand for the project stemmed from a previous but much smaller initiative during the pandemic by Belize Botanic Gardens (BBG) to provide seeds and plants to local families who were suffering food shortages due to loss of employment. As UoE and RBGE had worked with BBG on a previous Darwin main award (DAR 17-022), BBG invited us to co-develop this proposal with them. Over the last 5 years, Friends for Conservation and Development (FCD) also had a series of small projects encouraging local smallholder farmers in and around the Vaca Forest reserve to move away from clearing forest for pasture and maize cultivation, as the deforestation was causing a severe loss of biodiversity, and soil erosion was rapidly degrading any new agricultural production. Belize Maya Forest (BMF) and Ya'axche Conservation were two further NGOs we consulted during the project design, and with whom we have continued to have regular meetings throughout the project. We offered these organisations and also the Government Forest Department (FD) places at all our training events and at all our consultative workshops. They accepted all these opportunities (Emails and attendance lists verify this). We know that the project's messaging about biodiversity-poverty connections have been understood because our NGO and government stakeholders are now amplifying many of these statements in their own training courses, at national forest restoration. workshops they are organising, and because they are co-authoring policy briefings with us promoting this messaging within government.

UoE led the project design, with extended consultation for 18 months before, and continuously through the project with BBG, BMF and FCD. We frequently consulted the National Biodiversity Office NBIO, and the government departments of Agriculture (responsible for implementing the National Agroforestry Policy, and the Forest Department (responsible for engaging smallholder farmers in national forest restoration). This consultation helped to ensure the project addressed knowledge and skills gaps identified in the 2022 Forest Restoration Policy, such as the need to raise public awareness in Belize about the benefits of growing native plants, and to increase the number of Belizean organisations with the required botanical and horticultural knowledge. Emails can be supplied by the project PI to demonstrate ongoing consultation throughout the project. **Note: throughout this report, we will often direct the reviewer to the two appended reports by RBGE/BBG/UoE and by IIED in Annexe 5** where more detailed evidence is often presented.

Wider stakeholders have been involved since the outset, including the main educational institutions the University of Belize, Galen University and Mopan Technical College. We know that the project's messaging about biodiversity-poverty interconnections have been understood by our educational partners because they want to use our project outputs to expand their teaching about agroforestry and biodiversity. For this reason, we established permanent demonstration gardens for the educators and students at Galen and Mopan, as well as an agroforestry demonstration for FCD and a backyard garden setup for the British High Commission (BHC). These additional gardens created under output 3 and now adopted by all these stakeholders, have built a legacy that will endure well beyond this project. Photographs of Gardens to Go, and designs for the demonstration gardens are included in the RBGE/BBG/UoE report as verification.

IIED, our partner with a wide network of contacts with governments and NGOs promoting agri-biodiversity around the world, helped raise the international profile of the project under output 5. They featured the project in a special issue of the Tropical Agriculture Association's journal for agriculture professionals worldwide *Ag4Dev* (Annexe 3, Table 2) and have been publishing their learning from this project as a series of blogs (e.g. Sisters are doing it for themselves in biodiverse Belize | International Institute for Environment and Development . IIED provided keynotes (output 4.1) at two workshops convened in Feb 2024 and 2025, hosted by the Government Departments of Agriculture and Forestry, which revitalised Belize's National Forest Restoration Taskforce. Activities are described in section 5 of the report from IIED (appended as Annexe 5 to this report.)

We acknowledge the strong support received from the British High Commission (BHC), notably HC Nicole Davison and Christine Rowlands and DHC Kate Reynolds in Belize, and Marie José Villa and Deputy Ambassador Paul Huggins in Guatemala City. Following initial contact during proposal development, the BHC helped to amplify project communications. The BHC hosted a launch event at BBG in July 2023 and a closing event in the capital city on 6th February 2025, to raise awareness among high-level decision makers within and beyond Belize about this pioneering native planting project. Project outcomes were presented to over 60 senior officials from Government of Belize, NGOs and leading national and international educational institutes.

Government ministers met with the beneficiary farmers and heard their first-hand experiences. On 24/2/2025, the British Embassy in Guatemala City hosted a presentation of the project to >10 partners of DEFRA's Biodiverse Landscapes fund from Guatemala, Honduras, Nicaragua and Belize. Section 15 and table 1 include a selection of press releases, FCDO World News Stories, blogs, videos and materials from the project's launch and closing events, co-created with the BHC in Belmopan and British Embassy in Guatemala.

One of our achievements is that our educational partners in Belize have all given their long-term commitment to use the demonstration agroforestry plots established by BBG in their educational programmes. As the plots grow, they will provide a wealth of practical knowledge about how agroforestry systems evolve and the challenges of successfully maintaining them. There is evidence of the partners continuing to work together although this project has now ended. Given that the basic idea of propagating native plants and persuading smallholders to accept these has been proven to be possible on a small scale, the next step will be for the partners to apply e.g.for.a Darwin main grant with beneficiaries across Belize and from bordering communities in Guatemala, to gain learning from exploring the challenges of successfully scaling up the method.

3 Project Achievements

The table below summarises the changes achieved under each output, mentioning also any problems, either anticipated or unexpected, that arose and how these were resolved.

Output	Baseline condition – change by end of project (EoP)
Output 1. Botanical knowledge broadened.	**Baseline**: A few staff at two NGOS in Belize (BBG and Ya'axche) were skilled in identifying native hardwood trees, plants and seeds. Limited knowledge about which native or endangered species local farmers would be willing to grow, and which (if any) timber species they would consider including on agricultural or pastoral land. **Changes**: Plant identification training (Output 1.1) successfully completed for staff from four NGOs and the Government Forest Department in July 2023. Exceeded target DI-A01 for number of stakeholders from organisations across Belize receiving botanical training on native species by EoP, with 44 people trained over 64 days. Consultations with farmers revealed the species they wished to grow (table 3 in RBGE/BBG report in Annexe 5). For output 1.3, 236 species (121 native to Belize) were assessed by RBGE, IIED and BBG for their biodiversity and livelihood benefits. From this, 107 species, including 38 native species were selected for propagation. (output 1.3 – the target of selecting just 60 species was exceeded by almost 100%).
Output 2. Native plant propagation skills developed	**Baseline:** Smallholders farmers unsurprisingly had the widest growing expertise, with output 1.2 revealing a total of 11 native species being grown among all the farmers surveyed, and 33 species in total. Most farmers stated they had a limited knowledge of the diversity of native plants that could be grown successfully and which could offer biodiversity, food security or livelihood benefits. A narrow range of seeds was being collected. Only 3 organisations were collecting seeds. All were having difficulties propagating endangered native trees (e.g., BAHA could not source Ramon seeds, Ya'axche could not propagate Rosewood, Bayleaf, and Fiddlewood.) **Changes**: Seed collecting knowledge among NGOs has been broadened (section 2.1 of RBGE report) by training in year 1. Educators and PA rangers attended further courses in native tree and seed identification by RBGE and BBG in year 2. Horticultural knowledge of beneficiary growers (smallholders and backyard gardeners) was expanded: In year 1, a total of 105 person-days of training were delivered at BBG in five courses to members of 45 households, with >50% female participation, and with 31 households completing courses. This exceeded the target for horticultural training of 24 households (30% F) for 80 person-days (output 2.3). Since many could not attend on-site training, this was instead delivered through a series of 1-1 site visits by BBG to smallholders, backyard growers and institutions maintaining demonstration plots. BBG delivered 70 days of onsite training in year 2, (36M, 34F) as a more acceptable means of delivering output 2.4.

	Although resource intensive, this resolved the challenge that many growers could not travel for training, and many were learning more when advice was given on-site. From diaries of BBG staff, 15 smallholders each received 3 or 4 site visits, and 16 backyard gardeners received 2 or 3 visits, with a further 15 days supporting the planting on the demonstration plots. By EoP, 175 days of horticultural training (111M, 64F) had been delivered, exceeding the target for this indicator by 95 person-days, and underscoring the need to provide growers with frequent advice when they are transitioning to growing new crops using agroforestry principles. As a result, the outcome was that all the beneficiaries completed the project, and were able by themselves to add more plants from 20 of the species provided by the project. **Changes** in the propagation knowledge of BBG and of the beneficiary growers: 42 species of trees, shrubs, herbs and spices were selected in year 1 for growing in the expanding BBG nursery, of which 13 were native species. It was at first difficult to persuade farmers to grow native species, with perceived greater challenges and lower yields compared to using exotic cultivars. To overcome this, in year 1 we followed a strategy of offering more fruit trees, herbs and spices considered useful for supplementing farmer's diet and income, Details are provided in section 2.2 of the RBGE/BBG/UoE report. Then, in year 2, as they became more skilled growers, more native plants and trees were added into the planting baskets. The expanded nursery facilities at BBG in the second year allowed 73 further species to be added to the trials, of which 22 were native to Belize. In total, 105 species were propagated from seeds or cuttings by BBG, of which 42 were native. This exceeded the target of 60 species for propagation trials we had set as the indicator for output 2.2. The 'planting basket' idea was used to persuade farmers to receive a mix of species over the two years (see BBG/RBGE/UoE report for full list of plants offered following growing trials), along with necessary support and training. 15 families of smallholders received from 100-140 plants each for planting on their own plots (3.3) and 19 families with mainly female HoH received 'Gardens to Go' installations of seeds, soil mulch and containers, with training from BBG. In year 2, smallholders received further native plants to replace losses, together with custom support given on-site. Despite the challenge of persuading smallholders to accept slower growing native trees such as Cedar, Bayleaf, Custard Apple, or Soursop, the positive change is that all the growers who completed the project are now maintaining their planting, of which around 30% are native plants and trees. Additionally, the EoP site visits found the smallholders to be growing a further 16 species not provided by BBG, indicating they had successfully learnt and were able to apply the methods from the training. Many of the backyard gardeners were also collecting seed or taking cuttings in order to growing second batches of produce, showing they could use their training.
Output 3. Agroforestry demonstrator gardens established	**Baseline**: apart from a few individual demonstration farms in the Toledo District of south Belize supported by Ya'axche, there were no accessible demonstration areas in other parts of the country where farmers or students could see an established agro-forestry (AF) setup, explaining agroforestry designs such as mixed farming or silvo-pastoral systems containing hardwoods, fruit trees and animals, or how to restore canopy cover after a forest site had been cleared for agriculture or grazing. **Change**: One demonstrator plot has been constructed at BBG (output 3.1); and four more at Galen University; Mopan Technical College, and the NGO Friends for Conservation & Development. One backyard gardening demonstrator plot has been established at the Belize High Commission in Belmopan (output 3.2). All 5 institutions have agreed to maintain and use these as teaching resources beyond this project. All have been landscaped and planted with species grown in the expanded BBG nursery facilities. BBG trained staff from the institutions how to maintain their plots. Project findings are being used to design interpretive signage, explaining the concepts of agroforestry which are illustrated practically in each plot. Figure 8 in the RBGE/BBG/UoE final report is a photo of the demonstration plot at BBG; table 11 details the planting list, figure 9 shows the agro-forestry planting design and also the graphical layout for the signage. Figure 10 of the same report shows the evolution of the demonstrator plot at Galen University one year after installing the planting, including native trees such as Sapodilla, Soursop, Ramon (Breadnut) and native foodplants such as local Avocado, Chaya and Achiote. Despite initial delays in finding a suitable site, Figure 12 shows how the students at

	Mopan Technical College have been actively engaged by their teachers in planting and maintaining their demonstrator plot. Both Galen and Mopan are now developing practical classes teaching how different plants are grown together in agroforestry systems. Table 14 and Figures 14-15 of the same report illustrate how BBG developed a demonstration plot for Friends for Conservation and Development (FCD), a local NGO managing the Chiquibul, Vaca and Mountain Pine Ridge Forest Reserves in the Maya Mountain Massif. FCD interact with many of the farmers and communities adjacent to the Vaca Forest Reserve and promote messaging about the co-benefits to both biodiversity and farmer livelihoods of not clearing forested land for farming or grazing. They are now building a new ranger station adjacent to their demonstration plot, and plan to use this to give demonstrations and practical training to farmers promoting the benefits of agro-forestry techniques. After meeting the initial target to develop 4 demonstrator plots, BBG was approached by other institutions interested in creating demonstration gardens. They have completed an additional installation for the British High Commission in Belmopan (RBGE/BBG/UoE Report - Figure 16), and are exploring sites for further gardens with at least two local schools. This year, ~1300 primary school children and ~500 parents from 16 schools from all districts of Belize have visited the demonstration garden at BBG, receiving a presentation about the benefits of growing native plants.
	To make the project inclusive to those who did not own their own land, and also to allow people in different socio-economic circumstances to participate, (e.g. single mothers, retirees, etc), our beneficiaries were subdivided into 15 smallholder farming households (mostly male heads of household) receiving seedling plants on their own land parcels, and 16 landless households (13 female heads of household) receiving backyard 'Gardens to Go' installations (tools, pots, raised beds, soil mulch, seeds, booklet and access to a programme of support run by BBG over the phone. The backyard gardeners received the same horticultural training, receiving installations, start-up training and regular visits from BBG to their backyard gardens. Details of the G2G scheme are in Table 15 and Figs 18-19 of the same report. In surveys conducted at EoP all the G2G gardeners reported they had learnt and could apply new growing skills [indicator Di-A04]. These skills are being shared with their extended family networks, leading to a conservative estimate that the diets of >100 family members (~70 women) have benefited from the backyard growing (indicator DI-D05, table 1). The main challenge was the high demand for this scheme, which BBG had to manage by selecting only those participants showing most motivation to experiment growing native plants organically, from within the nearby communities that they could service with regular onsite visits.
Output 4: **Climate resilience capabilities enhanced**	**Baseline:** (4.1 *challenges facing smallholders*) Apart from one organised group practicing 'slash and mulch' cultivation by Inga intercropping in Toledo District and 2 projects started after this project with smallholders in the Belize River Valley and Maya Forest Corridor, there had been few successful attempts in Belize to engage smallholders to adopt more diverse planting and growing in agroforestry systems. **Change:** (4.1) consultations by IIED and RBGE (output 4.1) revealed which trees, crops, spices and plants smallholders in western Belize would consider growing. This provided a base for selecting native plants that smallholders were willing to grow for food security, climate resilience, and biodiversity benefits. Indicator DI-D05 based on surveys at EoP indicates at least 309 people (106M, 203 F) were reported as being better able to adapt to climate change as a result of the project. The most frequently reported benefits were diet, nutrition and food security benefits, both by the smallholders (145, (87F) and backyard gardeners (104, 69F). Smallholders reported additional climate resilience in the forms of improved water security (5 of 15, 2F) and increased resilience to wildfires (12 of 15, 3F) (Indicator DI-02) **Baseline** (4.2-4.4) (*smallholder knowledge of agri-business techniques*) There were prior attempts to incubate smallholder businesses – including training in Toledo District, Belize by IIED in 2014-15. BELTRADE had created a Small Business Development Unit, although it had not yet worked with many small agri-businesses. In Cayo District, there were a few individual entrepreneurs or women's groups selling excess produce and giving ad-hoc training on labelling.

	Change (outputs 4.2–4.4) IIED delivered 2 training courses to a mix of smallholders, the NGOs supporting them, the Government Forest Dept and college educators. Innovatively, they also included entrepreneurs who had started small businesses based upon agro-forest products. Participants undertook competitor analysis, and explored pricing, branding and marketing strategies for their produce. As a result, five farmer groups developed business ideas which they are now progressing with their local NGOs. Some beneficiary farmers are now being vetted for a project to develop smallholder agri-business in Belize. The business training focused on broad livelihood benefits from enhancing diversity of subsistence growing, such as improving nutrition and climate resilience; yet most smallholders and a few backyard gardeners did report modest improvements to income in their EoP interviews. Some reported income from surplus sale of cash crops (e.g., avocado, citrus, breadfruit), others by avoiding costs (e.g., by using organic pest control, or not needing to buy fodder for their animals). Importantly for the future, the NGOs (BMF, FCD). educators (Galen, Mopan Tech) and Forest Department (FD) who attended this training, have all learnt new skills that they are applying in their own agri-business training courses. (Further evidence that indicators for output 4 were all met is in the IIED report (Annexe 5, sections 4.2– 4.4)
Output 5: Biodiversity restoration practices promoted widely	**Baseline** (*national policy/ strategy):* The National Forest Restoration Strategy was signed into law in 2023, and the National Agroforestry Policy published in 2022. There was little evidence of either strategy being implemented. Ya'axche were promoting community cacao growing in one Forest Reserve, the only example of agreed community use of land for AF in any protected area in Belize. The Forest Department had established a National Restoration Taskforce, but this had not met in 3 years before this project. It was challenging to convene meetings attended by both Agriculture and Forest departments concerning the Agroforestry Policy. **Baseline:** (*public awareness of native planting*) BBG were the most active organisation promoting the growing of native plants, with booklets produced to promote their growing and use in cooking. BBG had gained recognition by broadcasting two series of a Gardening Show on national TV, and during the pandemic, they piloted a backyard gardening scheme with 8 local families. **Change** (*policy/strategy*): The project re-invigorated the National Forest Restoration Taskforce, by convening two annual meetings of the Taskforce in the capital city Belmopan on 7/2/2024 and 6/2/2025, each attended by ~ 20 key stakeholders including both the Departments of Agriculture and Forestry, and 10 other NGOs and educational institutes promoting agroforestry and forest restoration in Belize. As a result, the Head of the Restoration Desk at the Forestry Department agreed to write with us a Policy Briefing to the Government of Belize, advocating adopting the project's methods of native planting, to help achieve its Bonn pledge to restore 330,000 acres of degraded forest land by 2030. (Annexe 7 p.51 of the IIED Report). **Change**: (*public awareness of native planting*) A new series of the popular TV programme 'The Garden Show with BBG', was broadcast in 10 episodes on the National Channel from November 2024 to January 2025. The programmes were broadcast twice a week, and are now being re-shown about once a week, as it is popular. This additional broadcasting is excellent value for money, giving the project a high level of exposure to the general public. BBG are reporting increased bookings for Garden tours, with visitors mentioning the TV show. Section 5.2, page 50 of the RBGE/BBG/UoE report contains broadcast schedule, screen-shots showing Darwin Identity on all episodes filmed at BBG's Education Centre, upgraded with project funding. Links to example episodes are in section 14. Project activities have also been widely publicised through social media, including blogs on RBGE and IIED websites. Press releases through the British High Commission in Belize have appeared in local media, as World News Stories on www.gov.uk, and were widely shared on Facebook. Section 14 gives examples of outputs to confirm the target Indicator DI-C15 for media activity was exceeded.

3.1 Outcome

Our stated outcome was that **'Opportunities for growing more novel combinations of local foodplants, spices and CITES-listed trees within smallholder agroforestry are evidenced and widely spread, with baseline data on plants to benefit biodiversity and climate-resilient livelihoods collected'**.

The baseline condition in Belize, prior to this project was that, despite the Government Department of Agriculture having developed a National Agroforestry Strategy, and the Government Forest Department having endorsed a National Forest Restoration Strategy, there were only isolated efforts to implement projects promoting agri-biodiversity or agroforestry (AF). Although a National Forest Restoration Taskforce (NRFT) to co-ordinate landscape restoration had been proposed, it had not been functioning. With the exception of internal reports by the Belizean NGO Ya'axche, there was little evidence of how smallholder farmers might be incentivised to adopt more enriched and diversified growing.

Some of the constraints we had identified in Belize, preventing growers from adopting more diverse planting and growing, were (1) a lack of knowledge of native plants and seeds, and (2) how to propagate, plant and maintain native plants in more diverse AF systems. We had learnt that (3) many women were interested to learn how to grow local plants, but did not have any available land, and that (4) there were few examples of successful farmers, who could demonstrate established and functional AF systems, from which other farmers could learn. Finally, there was little public information being shared about the benefits of native planting and little sharing of best practices between farmers. These factors were leading to understandable resistance from farmers to invest limited resources into an unfamiliar and untested approach.

The first months of the project collected the baseline data **on native plants to benefit biodiversity and climate-resilient livelihoods,** to address the first part of the outcome.

To address the botanical knowledge gap (outcome 0.1), RBGE assembled a comprehensive database of native species they considered able to provide a range of benefits to biodiversity, food security and livelihood (RBGE report appendices). IIED then refined this by adding in local factors that might influence the willingness of Belizean stakeholder groups to grow these in Cayo District, bordering the Selva Maya Biodiversity hotspot. Through a series of farm visits, we analysed the variety of fruits, hardwoods and other crops being grown by smallholders, and how some had grown these whilst maintaining canopy cover (IIED report, annexe 5, output 1.2)

To meet the need for accessible demonstrations of successful AF systems, (outcome 0.3), BBG installed educational gardens at Belize Botanic Gardens and at Galen University and Mopan Tech College, an AF demonstration plot adjacent to the Vaca Forest Reserve, managed by the NGO Friends for Conservation & Development (FCD), and a demonstration backyard garden for the British High Commission to use as a showcase for visiting diplomats and professionals in the capital city. These demonstration gardens have been augmented with further native planting this year, and interpretative signage. Designs for each garden and illustrative photographs and signs are in sections 3.2.1 to 3.2.5 of the RBGE/BBG/UoE report. Most importantly in terms of legacy, all these institutions have confirmed they will continue to main these demonstration plots going forward, using them for further training and teaching.

The demonstration gardens, then, are an enduring way in which this project meets its **outcome** ensuring that 'Opportunities for growing more **novel combinations** of local foodplants, spices and CITES-listed trees within smallholder agroforestry **are evidenced and widely spread.**

To help overcome the challenge of smallholder farmers having limited access to knowledge about marketing agroforestry produce, outcome 0.4, led by IIED, enabled farmers and NGO staff appreciate the fuller benefits of enriched subsistence agriculture. In year 1 IIED helped BBG design surveys to understand the varieties of trees and plants currently grown, and farmer's constraints and future planting intentions (output 4.1) In the second year, for outputs 4.2 – 4.4, IIED delivered two training courses on the benefits of adopting AF systems. These were delivered to the project's smallholders, and also to government staff, local NGOs and educational institutions who now have the capacity to deliver further training beyond EoP.

Outcome 0.5 focused on raising public and professionals' awareness about the benefits of growing with native plants, sharing evidence widely about how the new approach can help smallholders meet their subsistence needs, whilst also incentivising them to grow in ways that will support longer-term landscape restoration. Awareness is rising through press and media coverage co-ordinated by the UK High Commission in Belize, and international publicity by UK partners (Gov.uk News; Darwin Newsletter; RBGE 'Botanical Stories'; IIED blogs). The project has been regularly presented to diplomats, government ministries and NGOs in Belize, Guatemala and the UK, re-invigorating Belize's National Forest Restoration Taskforce, and culminating in Policy Briefs to the Belize government. (Table 1 and IIED report, appendix 5).

The 2024-25 series of BBG's popular TV Gardening show continues to be repeated weekly on national TV, promoting growing and cooking with native plants, and explaining agro-forestry in simple, practical terms. BBG recently reached agreement to produce a 4th series, which will feature the smallholders and backyard gardeners, as their plots continue to grow during 2026.

These outcome indicators (0.1-0.5) together show that we devised and tested opportunities for growing novel combinations of local food-plants, spices and CITES-listed trees. We gathered information on typical varieties of trees and crops grown and farmers' willingness to diversify. We selected smallholders and backyard gardeners showing greatest motivation to experiment with agroforestry. They received plants and horticultural training from BBG. With continued support and mentoring, 15/18 smallholder farmers and 16/19 backyard gardeners successfully completed the project and are now maintaining their plots despite challenges such as floods, fires and drought over the last two years. From the knowledge gained by working with these beneficiaries, and project partners sharing results, we have begun to gain an evidence-based understanding of how smallholders may be supported to transition to more diverse AF systems.

The project was implemented in ways that were inclusive to both female and male growers, and enabled participation by those who did not own their own land. Through these interventions, and also by re-energising Belize's national working group on landscape restoration, we have demonstrated to government agencies and NGOs in Belize (and across the wider region), how local farmers can be assisted to grow more native plants within a wider mix of trees and crops, and how this in turn can help governments meet their national targets for forest restoration.

The early part of the project collected the baseline data **on native plants to benefit biodiversity and climate-resilient livelihoods.** Then, by documenting the growing trials, by mentoring and monitoring the smallholders and backyard gardeners as they progressed, by creating a total of five demonstration sites that have been adopted by different organisations and by engaging strongly with different audiences through blogs, TV programmes and policy briefs to government, we believe we also achieved the second part of the outcome that this **knowledge about agroforestry is both evidenced and widely spread within Belize.**

3.2 Monitoring of assumptions

The following table shows how outcome and output assumptions were monitored throughout. Whilst some assumptions and their related activities were modified, most largely held true. There has been learning about the readiness of smallholder growers to receive some of the native trees, enabling us to deliver more native plants in the second year, while compromising to meet the short-term needs of the farmers by giving them some rapidly producing exotic plants in the first year. The increased focus as the project progressed on the permanent demonstration plots and their adoption by institutions has been a way for us to ensure project legacy, in case some of the smallholders will not be able to maintain their plots in the future.

Activities were also modified due to the high level of motivation by the colleges to maintain, develop and integrate the demonstration plots BBG established for them, into their teaching. We also directed more resources for training of trainers within our partner institutions, designing new, innovative courses for mixed audiences of farmers and the NGO staff supporting them.

With these adjustments, we believe the pathway to change still holds true, and will improve its legacy in terms of an enduring use of its physical and knowledge outputs in the years to come.

Assumption	Current validity
0.0 no severe risks such as hurricanes, market collapse, or a pandemic prevents progress.	No severe weather affected the plant nursery. Some smallholders who do not have permanent ponds reported plants failing to grow due to drought, and so delayed receiving and planting saplings until rains returned. [activity 3.2] Many farmers received advice about water conserving practices which helped them cope better with drought. Despite installing fire breaks, some plots were burnt by fire, and two plots were inundated by flooding during 2024. Plants lost were replaced, with advice given about planting to mitigate against these hazards. .
0.1 'Planting–basket' concept promotes ideas of diversity, enabling both women and men to contribute to a 'long-list', from which shortlist of 10-30 species will be selected for seed collecting and propagation trials.	RBGE/IIED successfully created planting baskets for year 1 and year 2 from longer lists assembled under output 1. Sufficient farmers were found who began experimenting with more diverse planting. Standard indicators show that all activities successfully recruited female participants. To enable persons without land and different family situations to participate, the indicator for Activity 3.3 was subdivided into 15 smallholder farming households (mostly male heads of household 'HoH') receiving plants on their own land parcels, and 16 landless households (13 female Hoh) receiving backyard 'Gardens to Go'
0.2 assumes a sufficient number of native species in each 'planting basket' can be propagated and grown	RBGE/BBG/UoE report in Annexe 5 documents nursery trials of 115 species (35 native) that were mostly grown successfully. BBG/RBGE also documented the species that were more difficult to propagate, germinate, or grow.
0.2 There is a moderate risk of beneficiaries 'dropping out'. This will be reduced by making resources given dependent on monitoring by BBG	Interviewing used to select participants most motivated to experiment with AF, to reduce drop-outs after the horticultural training (output 3). Evidence in the RBGE/BBG/UoE report suggests a high level of motivation among most participants as a result of the ongoing engagement and support provided by BBG to both smallholders and Gardens to Go backyard gardening families.
0.3 Assumes BBG will maintain their garden beyond EoP so benefits arising as the planted native species mature to yield fruits, fibres and shelter can continue to be monitored.	We established 5 demonstration gardens, as there was a strong commitment from local NGO and educational partners to maintain these beyond EoP. The variety of institutions and locations for the demonstration plots will enable benefits of native plant growing to be showcased to a greater number of people, than relying solely on farmer-farmer interactions spread ideas. This is based on learning from year 1 and EoP surveys showing some diffusion from farmer-to-farmer but more via the demonstration plots and school visits to the BBG plot.
0.3 By having more working examples of enriched agro-forestry landscapes, beneficiaries will gain skills and confidence to propagate, plant and grow a greater diversity of native plants on their own agro-forestry plots.	Consultations (1.2) confirmed the need for farmers to see examples of established AF systems. BBG's plot was designed to contain more mature plants, shrubs and trees in order to demonstrate immediately what a more established AF plot will look like. Other plots have each been established with particular audiences in mind. Galen promotes mixed farming agro-forestry to science students; Mopan promotes silvo-pastoral systems to agriculture students; FCD promotes reduce canopy clearance to smallholders, and the British High Commission promotes backyard gardening to diplomats.
0.4. Since markets are still recovering post-COVID, we will focus on a species-diverse, organic approach to improve quality, and branding & marketing to raise the price of produce to be sold to known domestic markets. Assumes growers seek greater climate-resilience in subsistence systems. Some may produce a surplus for sale. Both can use diversification to spread risk of crop failure.	Although markets recovered over the last two years only some of the farmers and growers have had excess produce to sell, with most using their new skills primarily to meet their own subsistence needs. Many older participants wished to set up an agroforestry plot as a source of retirement income, so they could live off their land, spending less on bought food. All the farmers and growers have reported livelihood benefits, mainly in food security and improved nutrition; while some have obtained income from selling surplus produce and several have avoided costs by adopting organic growing. A majority of smallholders have reported improved climate resilience, measured through a combination of factors in EoP interviews. We also focused on building the capacity of our partner institutions to promote the benefits of diverse growing, involving them in training alongside the farmers they were supporting. In hindsight, this was the correct decision as it has created a series of NGOs with the skills required to train their own farmers.
0.5 we assume that by raising public understanding of the benefits of growing native food plants, and offering resources, committed trainee growers will be supported to form networks to upscale home-gardening and to diversify planting using agroforestry plots.	Evidence from the over-subscribed horticultural training sessions, in feedback provided on the training, and BBG's own monitoring of progress by smallholder farmers through site visits has shown that committed beneficiaries were indeed recruited to this project. The Gardens to Go (G2G) participants were also vetted to select only those most motivated to try mixed farming AF systems. The very high retention rates of 15/18 smallholders and 16/19 backyard gardeners confirms this assumption held true. Many smallholders and backyard growers also added in additional plants to those supplied by BBG, indicating they were able to apply their new horticultural skills to grow further plants.

0.5 If initial evidence gained suggests the potential for the approach to be replicable across the country, BBG can then lobby government for further resources to expand the scheme as part of a community-led approach to forest landscape restoration.	The results of the propagation trials suggest the scheme could be replicated by other institutions across Belize, if resources and training are provided both to enlarge nurseries and to up-skill technicians in propagation techniques. Evidence from regular consultations throughout the project with NGOs, universities and government agencies (activities 1.2, 4.1 and 5.4) suggested a willingness in Belize to share best practices and for projects promoting agroforestry and native plant growing to work more closely together (IIED final report – national stakeholder consultations February 2024; 2025). As examples, policy briefs have been co-written by Forest Department and IIED, whilst BBG has been invited to propagate plants for WWF and attend meetings of the national forest restoration taskforce.

3.3 Impact

The long-term impact is '**restoration of local biodiversity and more climate-resilient livelihoods through innovative planting combinations that mix diverse and nutritious foodplants, spices, and endangered trees in communities bordering the Selva Maya biodiversity hotspot'.**

By addressing five of the noted impediments restricting farmers and growers to diversify, and providing them incentives to do so, the project provides evidence of the benefits of more diverse planting and growing. Sharing this widely is expected to encourage uptake by more smallholders, and widen adoption by NGOs and government agencies. Spreading these messages widely during the project, and creating demonstrator sites and educational and training resources that will remain afterwards, should increase the prospects for these methods to be adopted by other farmers, and for the approach to be replicated by other NGOs and government departments throughout and perhaps beyond Belize.

The project's contributions to a longer-term impact on biodiversity are likely to emanate from the knowledge created and shared through the botanical assessments, the experience documented and now shared from the growing trials for native plants, the physical assets created such as the five demonstration gardens and the training materials embedded in teaching at local colleges and universities, and the enhanced capabilities and capacity of BBG.

The project's contributions to a longer-term improvement on human well-being and reduction of poverty, will stem firstly from evidencing how the enriched AF systems being showcased here can provide a breadth of benefits to smallholder farmers, decreasing risks if their main crop fails, increasing their food-security and improving their families' nutrition, as well as their resilience to drought and other climatic changes. The interviews conducted with smallholders after the end of the project period have revealed, perhaps surprisingly, that most already recognise they are receiving many of these benefits, and confirm they can successfully apply their new growing skills. As well as modest improvements to income, the new organic growing schemes are enabling many to reduce costs, and many feel the wider range of crops grown is reducing their vulnerability to pests or drought. Obtaining this range of benefits, as well as direct income supplementation by selling surplus produce, is encouraging all of them to continue their agro-forestry systems, even though the project resourcing has ended.

Clearly a two-year project in one District of Belize can only go some way to providing the more comprehensive base of evidence about the benefits to livelihoods and to biodiversity that will be needed to influence government thinking about farmer-led strategies for forest restoration. Nevertheless, by sharing our findings widely, we hope this project will be a catalyst, encouraging adoption of the approach, further trials and evidence gathering by other NGOs and government agencies, perhaps co-ordinated through the National Forest Restoration Taskforce (NRFT), the National Biodiversity Office and the Forest and Agriculture Departments.

Another pathway to impact will be by making links with partner organisations in Guatemala, who are also seeking to use more native planting in forest restoration in the Selva Maya, such as ACOFOP, an association of community groups managing forests in the Peten. This

organisation was invited to attend this year's meeting of the NRFT in Belize. Wider impact will also be achieved by promoting the new propagation capabilities and the expanded capacity of the native plant nursery at BBG, as a result of this project, to other stakeholders working on landscape restoration across meso-America. For this reason, project findings have already been presented to > 10 international NGOs from the BCF consortium implementing the Biodiversity Landscape Fund projects in Belize, Guatemala, Nicaragua and Honduras.
By engaging early with government departments in Belize, and with national and international NGOs, and making them aware of how this project is providing skills and knowledge that can assist those implementing agro-forestry and landscape restoration schemes, we seek to increases the prospects of the project ideas being more widely adopted.

Signs of wider adoption beginning to happen can be seen in a number of new projects being initiated in Belize, mostly by organisations that attended our training courses or workshops and who have been stakeholders of this project. Examples include new training courses on agro-forestry by our partners BMF and FCD, a new forest restoration project funded by GEF to be implemented by Belize Forest Department, and inclusion of BBG in two proposals to scale up the 'planting basket' method, one by WWF-Belize and WWF-Guatemala and one to the Global Centre for Biodiversity & Climate. In the last few months, several organisations including ACOFOP and WWF in Guatemala and Forest Department in Belize have contacted BBG to source training and plant propagation trials. The increased capabilities of BBG as a result of this project, is a necessary step on a pathway to longer term project impact. Evidence of this wider adoption can be observed in the number of senior decision makers attending the end of project presentations at the British High Commission in Belize on 6th Feb 2025, and the British Embassy in Guatemala on 21st February and the Policy Brief co-written with Belize Forest Department. Emails can be provided to verify the new project proposals and partner invitations.

4 Contribution to Darwin Initiative Programme Objectives

4.1 Project support to the Conventions, Treaties or Agreements

Reducing clearance of tropical forest for agriculture addresses Aichi targets 5 (habitat loss) and 10 (vulnerable ecosystems). These are priorities in Belize's 6th National Report to the CBD (2019). To meet targets B3 and D1 of the Global Strategy for Plant Conservation, the government-endorsed Biodiversity Strategy and Action Plan (NBSAP) recommends Belize should limit rates of deforestation to < 0.6% annually, with 75% of threatened species in vulnerable ecosystems conserved ex-situ through plant and tree restoration programmes.

Belize's Bonn pledge to restore 300,000 acres of degraded forest, will require engagement with smallholder farmers on Belize's agricultural frontiers. Belize Forest Department recently advocated using the agro-forestry and native planting methods developed by this project, as a key means of meeting its targets for forest restoration. (Refer to Policy Brief co-written by Minerva Gonzalez, Belize Forest department, in Annexe 7 (p51) of the IIED Final report).

By sharing the skills and know-how to propagate and grow native plants, the project is addressing the knowledge and skills gaps identified in the Government's National Strategy for Forest Restoration (GOB, 2022), By re-convening the National Restoration Task Force through annual meetings in 2023 and 2024, the project has made a positive contribution by re-opening dialogue between the Forestry and Agriculture departments over how to implement the National Agroforestry Policy, and align this with the National AgroForestry Strategy. This represents a significant change in government thinking, with the two departments more able to find common ground, despite sometimes competing priorities for agriculture and biodiversity conservation.

By mentoring forest users to improve their food security over the last two years, we addressed needs identified in the government's 2015 National Agriculture & Food Policy. Giving training to promote climate-resilient small businesses, and strengthening forest users' resilience to droughts and floods, are both actions recommended in the government's 2018 National Climate Change Policy, Strategy and Action Plan (NCCPSAP). These intersecting needs for climate resilience, food security and forest conservation were reiterated by the Belizean delegation at COP26 in October 2021 and were used when designing this project with the CBD Focal Point,

Belize's National Biodiversity Office (NBIO). At the project's closing event on 6th Feb 2025, the Director of NBIO commented that 'this project is showing practical ways of involving local farmers in biodiversity conservation, since it aids their own food security and climate resilience'.

4.2 Project support for multidimensional poverty reduction

This project had a short duration in which to conduct innovative experiments with native planting. Working with BBG in Belize was central to project success, because they already had some expertise in native plant growing, and some larger specimens that could be used for the demonstration plots. We also required an institution with facilities, infrastructure, and know-how in TV programme production. By implementing in Belize, the project was able to build upon these existing capabilities. BBG also made an in-kind contribution to the project which improved its value for money; this could have been more difficult to obtain elsewhere in Central America.

The communities participating are many of the poorest villages in Cayo District of Belize, (Bullet Tree, Calla Creek, San Jose Succotz, Benque Viejo, San Pedro) where income is mostly from smallholder farming. Many farmers tend small plots far from their villages, near the Vaca Forest Reserve bordering the Selva Maya biodiversity hotspot of Belize and Guatemala. This project benefited 15 smallholder family groups, with ~145 dependent family members, and 16 Gardens to Grow families, supporting over 100 family members. The beneficiaries are mapped in section 1.

Annexe 3, Table 1, Indicator DI-A04 shows that many of the beneficiaries reported they are already applying the new horticultural skills and capabilities they learnt. Many reported various improvements to their livelihood as a result of changes to their planting and growing practices. In EoP interviews with the smallholder growers, (appendix 5, section 3.2.2 of the RBGE/BBG/UoE report), most reported that the advice given about which plants, shrubs and trees should be planted in different parts of the AF system, was having immediate benefits.

The project aimed to enhance food security, and help smallholders appreciate some of the resilience benefits that arise from diversifying their growing. Whilst some smallholders received income from selling excess produce – e.g., limes, avocadoes, bay leaf, every one of the growers is using the new additions to their planting baskets to supplement their diet. Meeting this basic need for food security is an important contribution to poverty reduction and a first step in helping participants understand the benefits of diversifying their growing. Participants who reported enhanced growing skills, often linked this to building their resilience to the frequent droughts occurring in Belize. Building ecological resilience, enabling adaption to climate changes, and creating social networks in which individual farmers report they are more willing to co-operate and share their plant-growing knowledge (EoP interviews summarised in appendix 3.2.2 of the RBGE/BBG/UoE report, Annexe 5), are useful foundations for livelihood improvement and an indirect form of poverty reduction (Darwin Learning Note).

Although the project was implemented in Belize, many neighbouring countries are facing the same challenge of how to conserve biodiversity of the tropical forests of Meso-America. The knowledge being assembled in Belize is of wider relevance to the region, with many other organisations seeking sustainable uses of the same native trees and plants growing in the Selva Maya in Guatemala, as well as in the Yucatan, Honduras and Nicaragua.

For this reason, the findings of this project have been widely anticipated by partners of the Meso American BLF project. A briefing was given in Guatemala City on 21 Feb 2025 to 10 partners currently implementing the BLF. Several partners including WWF and ACOFOP have subsequently contacted BBG, inviting them to participate in cross-border landscape restoration projects, requiring native planting. This confirms that the project is generating knowledge that is also useful to a range of lower income countries across the wider region.

4.3 Gender Equality and Social Inclusion (GESI)

Please quantify the proportion of women on the Project Board[1].	[redacted] are 8 of the 12 members of the project Board. Hence **66%.**F
Please quantify the proportion of project partners led by women	[redacted]re 5 of our 8 partners meeting this condition. **Hence 62%**

GESI Scale	Description	Put X where your project is
Not yet sensitive	The GESI context may have been considered but the project isn't quite meeting the requirements of a 'sensitive' approach	
Sensitive	The GESI context has been considered and project activities take this into account in their design and implementation. The project addresses basic needs and vulnerabilities of women and marginalised groups and the project will not contribute to or create further inequalities.	
Empowering	The project has all the characteristics of a 'sensitive' approach whilst also increasing equal access to assets, resources and capabilities for women and marginalised groups	**X**
Transformative	The project has all the characteristics of an 'empowering' approach whilst also addressing unequal power relationships and seeking institutional and societal change	

Although women may not appear to have power in decision-making in Belize, they do exert influence at home, managing household resources and deciding about crops to be grown, especially now, when there are a variety of environmental stressors such as drought, floods and fire threatening food supply. Women can also be agents of change, often being receptive to new ideas and able to share these quickly through their more extensive social networks. To achieve inclusion from a diverse population, we recruited a varied demographic including women, teenagers and retirees, into our beneficiaries. We recognised there would be difficulties in obtaining equal representation in all activities because of traditional gender roles in Belize, i.e., smallholder farming is still a predominantly male activity. For this reason, we made extra effort to reach female smallholders interested in growing. We successfully recruited 4 women into the group of 15 smallholder families, and ensured everyone had equal access to the training resources. Table 1 in Annexe 3 confirms women attended 30 of 105 days training in growing native plants. Many women who came for training also brought family members and friends, and shared what they learnt with their extended family, increasing the reach of the training received.

Recognising that women customarily labour at home, we also developed the 'Gardens to Go' activity for women wishing to grow plants, herbs and spices in their backyards. Since most women could not attend residential training, we changed our approach and instead offered training on a 1-1 or small group basis, sometimes for women and teenage children only. Follow-up by a WhatsApp group enabled all to ask questions, solve problems and share successes. Table 1 shows that 16 households successfully completed Gardens-to-Go, with 13 female heads-of-household. We also worked to promote gender balance in the institutional activities. Two national consultative workshops achieved 37% participation from women leaders (Indicator DI-C14) who are still nationally in the minority.

Of the beneficiary growers and their extended families, indicator Di-D05 shows 203 of the 309 beneficiaries reporting being better adapted to climate change were women, with 22 of the 42 families reporting a successful adoption of new growing practices had a female head of household.

The meaningful participation of women was encouraged at all levels, including managing the demonstration plots, where at both Galen University and Mopan Technical College, the principal co-ordinators who will manage these in the future are women (Dr Denaie Swasey, Ms Anita Ochaeta).

[1] A Project Board has overall authority for the project, is accountable for its success or failure, and supports the senior project manager to successfully deliver the project.

4.4 Transfer of knowledge

Internationally: knowledge about the projects techniques and results were transferred by:

- Conferences: Rudy Aguilar attended 'Botanical Bridges 2023' in Melbourne and Bogota Colombia in 2024, explaining the project to institutions across the BGCI network. This was necessary because not all botanical gardens worldwide support local horticulture
- Exchange Visits to organisations with better developed organisation and marketing. e.g., BBG visited ACOFOP's co-operative forest restoration project using native plants in Guatemala, with a return visit by ACOFOP's Director and technicians in Feb 2025.
- High-level briefings, co-ordinated by the British Embassy in Guatemala to > 10 partners from Guatemala, Honduras and Nicaragua from DEFRA's 7-year Biodiverse Landscape Funding for Meso-America
- A series of news stories, newsletters and blogs about the project on websites of the international partners IIED and RBGE. Section 14 provides full details.

Nationally,

- through government-facing events such as the National Restoration Taskforce (NRTF) meetings (Feb 2024 and 25). Policy Briefings co-written with Belize Forest Department
- for our beneficiary growers, through horticultural and business training attended by Agricultural Extension Technicians, Community Development Coordinators from NGOs and government Forest Officers attended, all of whom are now delivering training to farmers in other Districts.
- for agriculture students, through five demonstration gardens across Belize, with signage and educational materials developed at Galen University and Mopan Tech College
- for local and international visitors to BBG, by re-publishing two books on Native Plants.
- for the public, through ten episodes of the TV Garden Show on the National Channel.

Human Capacity building

- BBG were given a permanent seat on the National Forest Restoration Taskforce, and have been approached by Belize Forest Department, and by WWF-Guatemala to provide assistance with native plant propagation as part of these national projects.
- During the project, Rudy Aguilar (M) received the Marsh Award for Education at Botanical Gardens, and was promoted to Co-Director of BBG. He has been invited to give an agroforestry course at the University of Tennessee in August 25.
- Other staff employed on the project have either been promoted in their existing institutions, or found work after EoP:

    a. Marcia Itza (F) – (administrator role ended at EoP) – obtained a permanent job at Belize Association of Protected Areas Management Organisations as a grant writer.

    b. Daniel Ical Aquilino (BBG nursery support assistant) promoted to Nursery Manager

    c. Harry Mesh (BBG tour guide) promoted to senior Guide, speciality in ethnobotany

    d. Ismael Ernandez (BBG Nursery Manager). Left to start his own native plant nursery

5 Monitoring and evaluation

The M&E system targeted both local participants (to build local learning around each outcome indicator) and national stakeholders (to spread evidence of the longer-term benefits of the diversified growing of native plant species). We used the SMART indicators in the logframe to track progress on the individual activities, and how these were contributing to our outcome. Following the BCF workshop at the start of the project, we re-mapped our indicators to match closely with the standard indicators. For table 1 we successfully mapped 15 indicators to Darwin standard indicators, adding two (Di-CXX and DI-CYY) to track the plant propagation activity and progress with the installations of the demonstrator plots. We also used and regularly updated the implementation timetable to provide a visual summary of where we were with each activity, reviewing this in our regular progress meetings approximately 2 monthly.

All partners were involved in reporting progress and contributing to the M&E. UoE took the lead in the financial monitoring, with partners providing regular updates on expenditure. Monthly monitoring of expenditure enabled the project to spend >99% of the budget, and to quickly redistribute all savings and underspends to our partners in Belize. This increased the project's value for money, allowing BBG to hire an additional member of staff to assist in the plant nursery, to send BBG staff to an international botanical conference, to complete upgrading of power and lighting in the BBG Education Centre, and to meet the increased costs of transport so that BBG could provide more training to farmers on their own parcels than initially budgeted. This tight co-ordination between the financial and the activity monitoring, allowed us to quickly enhance project activities to take advantages of these budget savings.

The work has been scrutinised in different ways. Project partners were encouraged to provide internal feedback continuously, whilst wider stakeholders were invited to give verbal and written feedback during annual stakeholder workshops held in the capital city, Belmopan. Feedback was also obtained from all training courses. Broader comments and suggestions were invited at external presentations of the project to different audiences, including progress updates twice a year to the British High Commission in Belize, annually to the British Embassy in Guatemala and to the Belize High Commission in London. EoP summary presentations were given to the government ministers and NGO Directors in Belize, and to NGOs working on the BLF in Meso America. The project was presented to the general public at the Annual meeting of the UK-Belize Association, to academics at the Centre for Sustainable Forests & Landscapes at Edinburgh University. and discussed internally at the UoE, RBGE and IIED in Edinburgh. Constructive comments were assimilated and used to adapt the delivery of project activities. Changes to individual activities are discussed in 3.2, in section 7 and also in the next section.

6 Lessons learnt

Here, we discuss some lessons learnt relating to the delivery and overall success of the project. Further lessons learnt from the growing trails about specific native species and some possible approaches to upscale the project are summarised on page 52 of the report from RBGE/BBG.

The design of the project was enhanced, at an early stage, by subdividing the beneficiaries into groups of smallholder farmers, backyard gardeners, NGO/government professionals and school/college educators, and designing specific activities for these different audiences, whilst allowing overlap to gain efficiencies when groups could be mixed. This greatly facilitated planning delivery for both the horticultural training by BBG, and the 'risk to resilience' training by IIED. For the horticultural training, many smallholders were unable to come to centralised, residential training at BBG as had originally been envisaged. This was mainly because their farms were distant, and many smallholders also had other jobs and worked their farmland part-time. Many women applying to the 'Gardens-to-Go' scheme were expected to have caring commitments that prevented them attending on-site or residential training. For both groups therefore, more 1-1 or small group training had to be given than originally anticipated.

Recruitment of the participants for the horticultural training had taken longer than initially expected in year 1, but this careful vetting reaped benefits during the remainder of the project.

Informal interviewing was used to select only those participants showing the most willingness to plant with native species and to try new agroforestry designs. Farmers who only wanted to consolidate growing of e.g., lime or avocado, without introducing native plants, were rejected and did not receive plants and training. This proved a good way to ensure participants were committed to the project. Another refinement made in response to feedback from participants was to first offer plants that would provide them shorter-term food security. Then, after the participants were more committed to the project, and more confident to use their new growing skills, BBG increased the number of native plants and hardwood trees in their planting baskets. The lesson was that careful selection gave us participants willing to experiment, enabled better retention of growers, and allowed more useful evidence to be gathered about how to transition to growing native plants, even if the evidence base is from a smaller number of beneficiaries.

Thinking about what could have made the project better, the obvious answer is more time and resources. Our main challenge from the start, was to design a project growing plants that could bring about some meaningful changes, establish some physical legacy and begin to gather evidence in just two years. A three-year Darwin Main project (or longer, such as the 7-year Biodiverse Landscape timeline) would have enabled evidence gathering over multiple years, helping us to understand further the challenges that smallholders may encounter as they transition more fully to agroforestry systems. It would have been ideal to gather this evidence as part of a more geographically comprehensive programme, involving beneficiaries from different areas of Belize, whilst additional understanding could have been gained by including counterpart organisations managing the Selva Maya in Guatemala. Nevertheless, given the time constraints, we are satisfied that the project met its aims and outcome, by concentrating on gaining experimental evidence from the plant propagation trials, gaining in-depth learning from a small cohort of beneficiaries in one district of Belize, and leaving a significant physical and institutional legacy by establishing 5 educational demonstration sites, as well as re-starting government discussions on how to implement agroforestry to meet forest restoration pledges.

We recognise much was achieved due to the prior experience of all the project partners from working on previous Darwin projects, and the significant additional resources that all partners, including Belizeans, contributed. This allowed more to be achieved, and most of the funding to benefit local institutions in Belize, such as by creating the enduring demonstration gardens.

The final learning point was that all the partners were willing to experiment and adapt how they delivered activities, depending on what local beneficiaries asked for. Elsewhere we give examples of changes, e.g., to delivery of horticultural and business training, showing how content and methods were adapted to better suit local needs. We also learnt from our project board, and our independent project reviewer, taking on suggestions so we still achieved the project outcome, but in ways more useful to our beneficiary growers and NGO stakeholders, and from which we actually understood more about the challenges they were facing.

7 Actions taken in response to Annual Report reviews

We received two useful comments from the mid-term reviewer, which we discussed as a project team and with our wider stakeholders, and responded with these actions:

Reviewer comment 1

"Activity 4.2 (Up to 4 groups (~50% female) trained during 2024 in the resilience benefits of diversified production, and sale of diversified produce). Does the IIED proposal to modify this activity mean growers will not receive training in business options, sale and organisation?"

Project actions

After consulting with the beneficiary groups, IIED modified the training to instead deliver two, 2-day workshops during year 2. The first, on 'Agri-business and diversified production', was delivered in August 2024. The second, on marketing and sale of produce, in February 2025. Between the two trainings, ~20 participants (a novel mix of smallholder farmers and practitioners from NGOs) undertook locally-led assessments of markets for up to 6 food or native plant-based products. By re-designing the training to respond to these local needs, growers received more training in business options, sale and organisation than originally planned, whilst also having opportunity to interact with government and NGO staff and with owners of small agri-businesses, who also contributed to these workshops. The re-styled

workshops were more innovative, and the feedback from the participants of both workshops showed excellent satisfaction among the participating farmers and the NGO professionals.

Reviewer comment 2

"In Y1 only 20 native species were selected for nursery trials and although another 50 or so native species have been identified for trials in Y2, it will be difficult to achieve useful information related to their cultivation in the remaining time left. Is there a commitment from the hosts of the experimental plots to maintain and monitor them beyond the end of the project?"

Project actions

As as an 'Innovation' project with only 2 year's funding, we have been rapidly learning, experimenting and improving our techniques. BBG are committed to continuing trials with native planting beyond the end of this timeframe. We have obtained commitment from all the partners (Belize Botanic Gardens, Galen University, Friends for Conservation & Development, Mopan Technical College and British High Commission) to continue to maintain and monitor their demonstration plots. All have been doing so successfully since the funding ended in April.

The reason for propagating fewer native species in year 1 was that we had to adapt our strategy for recruiting participants; this involved incentivising farmers by providing them with more exotic plants in the first year that provide short-term food security, along with native plants that enhance biodiversity but take longer to reach maturity. By carefully recruiting beneficiaries committed to native planting, we achieved good retention of farmers willing to accept more native plants in the second year. Despite the project timeframe being limited, BBG actually exceeded the indicator for activity 2.2 (60 species, of which 20-30 native species for propagation) by end of project, and were able to share information about how to successfully propagate and plant out these native plants and trees, effectively with all the smallholders.

8 Risk Management

The founding Director and Owner of BBG, Judy Duplooy, sadly passed away on 5th April 2024. Judy was an inspiring person, who dedicated her life to the idea that the conservation of plant biodiversity does not have to be at odds with creating and improving livelihoods for local people. An early advocate in Belize for growing, eating and wider use of native plants, she had helped co-design several successful Darwin projects over the last 20 years and continued contributing to this one until her final months.

From the perspective of risk management, this was not unexpected, and BBG had made arrangements for the Directorship to transfer to Judy's daughter Heather, also a skilled botanist, supported by a Board of Trustees, with considerable financial and project management experience. Rudy Aguilar, in-country project lead was promoted to become Co-Director of BBG. Most of the horticultural staff remained in post and continued to work on the project. Nevertheless, there was inevitable disruption to activities in April and May 2024, with BBG closing temporarily for 6 weeks while the transition took place, and giving staff time to adjust. Whilst most activities planned for April-May 2024 could be postponed and rescheduled, a second season of seed collecting planned in April with local universities had to be cancelled. Although the target for training on seed collecting (activity 2.1) was still met through a different training course delivered in late May-June, the opportunity to collect hardwood seeds only available in April was lost, resulting in BBG having insufficient seeds to propagate some native hardwoods in the second year.

Other risks identified in the original proposal continue to be regularly monitored. The risk of significant numbers of participants dropping out of the project, fortunately, did not occur. We sought to minimise this risk through careful vetting of beneficiaries during recruitment, prioritising this over maximising the numbers of people signing up for the project. The risk of staff turnover in a relatively small organisation such as BBG did materialise, but we tried to minimise this by hiring a nursery assistant, Daniel Ical, to support the nursery manager, Ismael Ernandez before the BBG nursery was expanded with project funding. This proved to be foresightful, because Ismael left towards the EoP to start up his own native plant business.

By their nature, innovation projects trialling new ideas should expect to have a higher risk of failure than projects rolling out established methods. With experimentation, most of the native species tested in the propagation trials proved possible to grow in sufficient volume, when enough viable seeds or cuttings were available, enabling BBG to meet its targets for the number of native plants propagated by EoP, Nevertheless, the constraints and failures, such as the failures of Fiddlewood and Tuki seeds to germinate, restricted sources for Rosewood and Ramon seedlings, lack of success propagating Billywebb from cuttings, and poor survival rates of some other cuttings (e.g. Polly-redhead) were all meticulously documented by BBG and RBGE, along with techniques applied experimentally (see Appendix 2.2.2 to their report).

9 Sustainability and Durability

Evidence that this type of scheme is attractive to farmers and growers in Belize is shown by the high proportion successfully completing the project (15/20 smallholders; 16/19 backyard gardeners) and now applying the skills learnt from the horticultural and business training (DI-A04, 43 (22M, 21F), with some of the institutional trainees now giving training to others.

Evidence of us incentivising and enhancing stakeholder capabilities at all levels, from project beneficiaries to government, include (i) the high level of uptake and usage of the botanical and horticultural training by all beneficiary groups (ii) in the strengthened capability at BBG where plant nursery capacity has increased, a demonstration garden has been created and their educational visitor centre has been upgraded and (iii) in the increased national institutional activity by NGO and governmental stakeholders since the project reconvened Belize's National Forest Restoration Taskforce (NRFT). In terms of ongoing engagement, there is evidence from the EoP interviews that all the beneficiaries do intend to continue their growing of native plants, using the skills learnt, with many already adding additional plants they are growing themselves. They report sharing this knowledge with extended friends and families. At an institutional level, government and NGO stakeholders have agreed to continue the annual meeting of the NRFT.

The fuller benefits of this project will appear in future, as demonstration gardens mature and smallholder farmers, students and children can see at first hand, the benefits of native planting and agroforestry techniques. The enduring physical benefits of this project are likely to be these demonstration gardens, and the associated college courses and school visits they will support. This is why they were established at NGOs and colleges who made long-term commitments to maintain them for future cohorts of students to learn about agro-forestry.

The project successfully leveraged government policies such as the Agroforestry Policy and the National Forest Restoration Policy, as means of engaging national stakeholders.
Project beneficiaries are recorded in the Forest Department's register of smallholders involved in forest restoration, and will feature as 'champion growers' in further training by FD and by NGOs to promote growing with native plants. For this reason, the BHC asked BBG to install a demonstration backyard garden at the Residence of the High Commissioner, to spread the ideas to government ministers, NGOs and international visiting diplomats.

In terms of changing public opinions and attitudes towards growing and eating native plants, the popularity of the TV show developed by the project, the frequent repeating of episodes since its first broadcast, and demand for a further series by the National Channel in Belize, are signs of increasing interest and understanding of native planting.

In terms of sustainability, all project staff are in permanent positions, where they continue to promote native planting. Rudy Aguilar was promoted from Manager to Co-Director of Belize Botanic Gardens, Ismael Ernandez (Nursery Manager) left BBG just before EoP to start up his own business based on native plants, so Daniel Ical his understudy became the new nursery manager. Among other staff at BBG during the project, Harry Mesh has been promoted to become a Senior Visitor Guide, specialising in Ethnobotany. Marcia Itza (project administrator) left after EoP to take up a new position as grants writer for the Association of protected Area Management Organisations (APAMO) based in the capital city.

10 Darwin Initiative identity

Whilst collaborating with other UK government projects such as the BLF, this Darwin Innovation Project retained its own identity, because it focused on growing native plants, and producing specific evidence about this that was complementary and not overlapping with any BLF activity. The Darwin Identity is known to government and NGOs Belize, as there have been at least ten Darwin projects in Belize, such as 17-022 (Conservation of the lowland savannas of Belize), and 22-013 (Conserving pine woodland biodiversity in through community fire management). These last two terrestrial projects both established legacies such as permanent plots for monitoring fire effects, and interpretive educational trails for schoolchildren to learn about the savanna ecosystem. However, since the last Darwin project ended in March 2018 and Belize becoming ineligible for Darwin funding from 2019-2022 after it was reclassified as a UMIC, the Darwin identity has been declining in recent years compared to other funders.

For this reason, since the award of this Darwin Innovation award in April 2023 we have been working with the Belize High Commission (BHC) media team and the BCF Comms team to re-establish the Darwin identity in Belize. The BHC team promoted this project with a media launch at BBG in July 2023, associated press releases, Facebook posts and the World News Story “UK funds Darwin Initiative Innovation Project in Belize” on GOV.UK, making clear the UK government’s funding of the project. This was reinforced with the BCF and Darwin logos on the videos, such as https://fb.watch/nWjUP9Fcot/. The BCF comms team amplified the food-security aspects of the project, featuring us in the BCF newsletter ‘Food for Thought’. All episodes of the popular TV ‘Garden Show’ on Belize’s National Channel, feature the Darwin Identity, as can be seen by reviewing some episodes using the links in Section 14 below.

11 Safeguarding

12 Finance and administration

Project expenditure project since last Annual Report

Project spend (indicative) since last Annual Report	2024/25 Grant (£)	2024/25 Total actual Darwin Initiative Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)	[redacted]			
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items (see below)				
Others (see below)				
Audit Costs				
TOTAL	**£81,133**	**80,065**		

Staff employed (Name and position)	Cost (£)
Rudy Aguilar, Operations Manager, Belize Botanic Gardens	[redacted]
Harry Mesh, Outreach and Communications, Belize Botanic Gardens	
Roxanne Richards/Marcia Itza, Project Manager/Finance, Belize Botanic Gardens	
Isamel Ernandez, Horticulturalist - Nursery Lead, Belize Botanic Gardens	
Aquilino Daniel Ical, Horticulturalist - Nursery Support, Belize Botanic Gardens	
TOTAL	

Capital items – description	Capital items – cost (£)
None	£0
TOTAL	£0

Other items – description	Other items – cost (£)
Graphic Design for Permanent Signage for Demonstration Plots Production of Permanent Signage for Demonstration Plots	[redacted]
TOTAL	

12.2 Additional funds or in-kind contributions secured

Matched funding leveraged by the partners to deliver the project	Total (£)
International Institute for Environment and Development	[redacted]
University of Edinburgh	
Royal Botanic Garden Edinburgh	
Belize Botanic Gardens	
TOTAL	

Total additional finance mobilised for new activities occurring outside of the project, building evidence, best practices and the project	Total (£)
Graphical designs commissioned by IIED to present evidence from this project to the UN-FAO Forest Farm Facility.	[redacted]
Grant from Stanley Smith Charitable Trust to BBG for landscaping outside the Visitor Education Centre (upgraded with project funds).	
Small grant from University of Edinburgh to present project findings at the forthcoming UK-Belize Association meeting at Oxford University in Oct 2025	
TOTAL	

12.3 Value for Money

- Monitoring and Evaluation costs were part of the **matched funding of** [redacted] **which again this year almost the doubled the available budget.** This was contributed mostly as salaried time by project staff at UoE, RBGE, IIED (from the Farm and Forest Facility) and BBG. One member of UoE staff (Moss) was dedicated to M&E and financial monitoring, with an in-kind salary contribution valued at [redacted] Stuart (UoE) and Goodwin (RBGE) also contributed time to M&E valued at a further [redacted] with additional M&E on IIED activities by staff Logan-Pang and Macqueen, [redacted]
- Due to a combination of an improved GBP: USD exchange rate since the project was budgeted in Nov 22, and savings made by UK partners, we were able to pass on an additional [redacted] **han originally budgeted** this year to our partner, BBG.
- The additional funds, together with exchange rate divided, were spent on:
    - **Staff Costs** – additional funds component [redacted]
        - 1 x additional nursery technician for 9 months
        - 23 days of staff time for; additional visits to smallholder farmers, additional 'Gardens to Go' installation at the British High Commission, and local support with final reporting.
    - **Overheads** – additional funds component [redacted]
        - To recompense above inflation price rises in utility costs
    - **Travel & Subsistence** – additional funds component [redacted]
        - For additional M&E visits to smallholders; visits to 3 demonstration sites for signage installation and visits to British High Commission for additional Gardens to Go installation.
    - **Operating Costs** – additional funds component [redacted]
        - For vehicle costs associated with additional work above.
    - **Other Costs** - additional funds component [redacted]
        - Graphic Design and production cost for 4 bespoke signs at each of 4 Demonstration plots
- Production of the TV Garden show is providing excellent value. Approximately one episode is now being repeated on national TV every week since the series was first broadcast in February, increasing our reach and at no additional cost to the project.

13 Other comments on progress not covered elsewhere none.

14 Outstanding achievements of your project

I agree for the Biodiversity Challenge Funds Secretariat to publish the content of this section

The project received outstanding support from the **British High Commission in Belize.** A delegation including the High Commissioner Nicole Davison and Deputy HC Kate Reynolds attended the **Darwin launch event** at Belize Botanic Gardens, and have promoted the project throughout and beyond Belize. Watch a video of the launch event here: https://fb.watch/nWjUP9Fcot/.
https://www.facebook.com/ukinbelize/videos/658172843131023/

We were delighted this project was selected by the **BCF Comms team** to feature in the **BCF Newsletter 'Food for Thought'**. High resolution graphics used were also provided with consent to re-use on 29 Feb 2024 (email to Xanthe, BCF-Comms@niras.com)

We appeared in January 2024 on the **'Latest News' section of the Darwin.org.uk website** https://www.darwininitiative.org.uk/news/2024/01/27/growing-the-potential-of-planting-baskets/

We were pleased to support Rudy Aguilar from BBG to travel to Colombia to participate in the 'Botanical Bridges Conference' organised by Botanic Gardens Conservation International. We congratulate Rudy on his award from BGCI recognising his achievement in botanical education, through the prestigious Marsh Charitable Trust Award.
https://www.marshcharitabletrust.org/award/marsh-award-for-education-in-botanic-gardens/

The project supported the recording and distribution of a new series of The Garden Show on National TV hosted by Rudy Aguilar and filmed at Belize Botanic Gardens, using facilities upgraded by this project. The new series was broadcast between Nov 24 and Feb 25 and included two episodes specially commissioned by this project to highlight native planting. All episodes featured Darwin Initiative branding. Episodes 6-10 of the current series have been made available temporarily by the producer, for viewing by the reviewer using this link: (NB the episodes are copyright and should not be shared – we are providing this as evidence)

https://drive.google.com/drive/folders/1DRNmXwUFo4FIk1F-MWfCi4JjKxVdfgGn?usp=drive_link

Image, Video or Graphic Information:

Type	File Name or File Location	Caption, country and credit	Consent of subjects
GOV.UK World News Story	https://www.gov.uk/government/news/uk-funds-darwin-initiative-innovation-project-in-belize	**UK funds Darwin Initiative Innovation Project in Belize**	Yes
BCF Darwin Newsletter	https://edin.ac/3wwWh6w	**Season 3 episodes 6-10 of the Garden Show**	Yes – viewing only
TV episodes	https://edin.ac/3ZUG5HF	**'Food for Thought'**	Yes
British High Commission Facebook	https://fb.watch/nWjUP9Fcot/.	**Growing native plants to restore landscape diversity – a Darwin Innovation Project**	Yes

Annex 1 Report of progress and achievements against final project logframe for the life of the project

Project summary	Progress and achievements
Impact **Restoration of local biodiversity and more climate-resilient livelihoods through innovative planting combinations that mix diverse and nutritious foodplants, spices, and endangered trees in communities bordering the Selva Maya biodiversity hotspot.**	We have been able to demonstrate to government agencies and NGOs in Belize, that a strategy of growing more native plants in varied agroforestry systems, using a mix of native foodplants, spices, and endangered trees, whilst using exotic cultivars to provide food and income in the transition period, can be accepted by smallholder farmers bordering the Selva Maya biodiversity hotspot in Belize. Wider uptake is dependent on further training and support being provided by organisations such as NGOs and government agencies. Despite the constraints of a two-year project, there are significant positive changes in how members of the local farming communities we targeted in western Belize are now managing agri-biodiversity. Messages about the benefits of native planting are continuing to be widely spread throughout Belize, through ongoing popular school visits to BBG, by further broadcasting on national TV, and by NGOs and government adopting our materials and giving further training in these new techniques, including courses for NGOs at the new facilities created at BBG. Durability has been established in 5 demonstrator gardens promoting innovative agroforestry systems which are all being maintained beyond EoP by our partner educational institutions. As a result of capital investments in its Education Centre funded by this project, and with additional funding from other sources, our main partner Belize Botanical Gardens has significantly enhanced its educational and training capability, its physical nursery capacity, and its institutional profile so that it can have greater national and international impact. Broader impact will be achieved through wider education and training, and further activities, with all partners continuing to work together to secure commitment and resources to now up-scale this proof-of-concept innovation project; this entails working further with national agencies to reach farming communities across other parts of Belize and to embed this new approach within Belize's national forest restoration strategy.
Outcome **Opportunities for growing more novel combinations of local foodplants, spices and CITES-listed trees within smallholder agroforestry are evidenced and widely spread, with baseline data on biodiversity and climate-resilient livelihoods collected.**	
Outcome indicator 0.1 Database of native species, CITES listing, IUCN conservation status, rarity, pollination role, ecological importance, nutritional value, climate resilience and markets for produce surplus to subsistence need. Report produced summarising rationale for selecting ~30 target species for combined potential to meet needs of biodiversity, food security and livelihood	BBG and RBGE consulted with our beneficiary growers to assess the native and cultivated species they wished to grow (Annexe 5, RBGE/BBG/UoE report, table 3). IIED collected baseline data on factors influencing the livelihoods of our Belizean smallholder farmers and what further crops could they grow to improve their livelihoods (Annexe 5, IIED report, output 1.2) For output 1.3, 236 species, including 121 native species and popular local cultivars were assessed for their biodiversity contribution; conservation status, rarity, nutritional value, drought tolerance; reported ease of propagation, longevity, time to produce income and local market demand. From this baseline data, 101 species, including 38 native species were selected for propagation trials over the two years. Initial reports by RBGE and BBG in year 1 justified an initial basket of 42 target species (13 natives) to be grown in the nursery, which smallholders would be most likely to accept for planting and for creating the five demonstration gardens. Based on first year experiences and a larger nursery capacity, 73 further species (25 further natives) were selected for the second year for propagation trails. The creation of three reports, and one database for 237 species exceeded the target of two reports for 200 species which was the outcome indicator (0.1).

Outcome indicator 0.2, Monitoring of trials on targeted native species (indicators such as % survival during stages of growth) Reasons for adoption of species (or not) by the various growers monitored using records of seedling uptake and feedback obtained from training sessions.	Between July 2023 to March 2024, BBG successfully grew > 5,000 plants of the 42 target species (13 natives) shortlisted. In year 2, the expanded nursery capacity enabled them to propagate almost 10,000 plants from seeds and cuttings. In total, 101 species were propagated from seeds or cuttings by BBG, of which 38 were native. This exceeded the target of 60 species for propagation - the indicator for outcome 0.2. Logbooks at BBG systematically document means of obtaining seed or juvenile plants; methods of propagation, ease or difficulty of growing, and feedback about any difficulties with maintaining specific species. Case studies featuring 10 native plants fulfilling a variety of purposes are showcased on pages 17-20 of the RBGE/BBG/UoE report, with Appendix 2.2 providing a comprehensive summary of plants propagated and planted out by each of 15 smallholder farmers who completed the project. Equivalent details for the 16 backyard gardeners who completed the smaller scale 'Gardens to Go' scheme are recorded in the same report (annexe 5 to this report).
Outcome indicator 0.3 Plans of demonstration gardens and experimental AF plots, detailing species used, landscaping and planting to enhance biodiversity and conserve soil and water. Progress tracked using photographs evidencing initial planting and development through 2024-25. ~24 households (>50% women) receive horticultural training to begin planting their own plots with target species.	Demonstration agroforestry gardens were first established at BBG and at Galen University and during year 2 at Mopan Technical College in Cayo District. An agroforestry plot was created for Friends for Conservation & Development (FCD), bordering the Vaca Forest Reserve, with permission of Belize Forest Department (FD). An additional demonstrator garden was installed for the Belize High Commission (BHC) in Belmopan, meeting the outcome indicator 0.3a to create 4 demonstration gardens by EoP. For each demonstrator, sections 3.2.1 to 3.2.4 in the RBGE/BBG/UoE report detail the garden designs, planting lists and signage informed by the project findings, explaining each of the novel agro-forestry layouts developed. Photographs taken during installation and then at EoP document the evolution of each plot. For wider participation, beneficiaries were subdivided into 15 smallholder farming households (3 female heads of household (HoH)) receiving plants on their own land parcels, and 16 landless households (13 female HoH) receiving backyard 'Gardens to Go' installations and training. In year 1, a total of 105 person-days of training were delivered at BBG to 45 households, with >50% female participation, with 31 households completing all horticultural training. This exceeded the target for horticultural training of 24 households and 80 person-days (outcome indicator 0.3b). On-site training at BBG planned for year 2 was instead delivered through a series of 1-1 site visits by BBG staff to the smallholders, backyard growers and to the staff maintaining the institutional demonstration plots. BBG delivered 70 further days of this onsite training in year 2, (36M, 34F) as a more acceptable means of teaching horticultural skills (more details below under output 2.4).
Outcome indicator 0.4 '*Risk to resilience'* training given by IIED to up to 3 training organisations' trainers and students, (>50% female) Evidence of changes in the beneficiaries' planting intentions and practices tracked by IIED through locally-led assessments of what participants are growing differently for subsistence and commercial sale by EoP.	To understand planting intentions, a survey was developed by IIED and field tested on smallholder farmers attending training. 15 shorter surveys and 8 longer in-depth interviews were conducted with smallholders, to understand their present growing systems and the livelihood benefits they might expect from a model of enriched subsistence use. Interviews revealed grower's preferences for specific trees/crops (results summarised in the IIED report, under output 4.1. This provided the evidence for selecting the native plants that smallholders would be more willing to grow for reasons of food security, climate resilience and income supplementation. Following discussions with all partners, and also on the advice of the independent reviewer, we included some training on marketing into the 'risk to resilience' training planned by IIED for year 2. Training (output 4.2) was divided into two courses, and re-designed so that both smallholder farmers and NGOs could attend together. '*Making a business out of Agroforestry*' on 20-21/8/2024 was attended by 18 participants (~ 50% female) and innovatively combined smallholder farmers, Government Forest Department, NGO technical staff and college educators. '*Marketing and labelling of agroforestry* products' on 13-14/2/2025 was attended by mostly the same

Promotional materials designed for effective AF plot designs, highlighting the benefits to buyers of sourcing locally from enriched AF systems used by champion growers.	participants. Between the courses, participants studied potential local markets and developed ideas for branding and promoting their produce. Reporting in sections 4.2-4.4 in the IIED report (annexe 5) and the standard indicators in table 1 (Annexe 3) confirm that the targets for 0.4 outcome indicators were all met, especially for delivering the agri-business training, where 76 (>40) person days were delivered. Several of our beneficiary growers and members of a farmers' co-operative who also completed this training have now been selected for a project funded by the Protected Area Conservation Trust and government business development unit BELTRADE to develop plans for these small businesses. Trainers from government and NGOs who attended these courses are now planning further courses, for different smallholder groups in other areas of Belize, using these same workshop materials with permission of IIED.
Outcome indicator 0.5 Public awareness of benefits of growing a greater diversity of native species is raised through media campaigns and educational activities around the new agroforestry gardens by EoP. Meetings held with relevant government ministries by June 2023. Schedules for a new series of the TV Garden Show developed by December 2023. Evidence of BBG's inclusion in discussions with National Forest Restoration Taskforce (NRFT) by April 2024.	Awareness of this native planting project has been raised among government and NGOs through a series of in-person events, including a launch event at BBG and a closing reception for government decision makers in the capital city, co-ordinated by the British High Commission in Belize. These have been reported to FCDO colleagues internationally as World News stories and press releases on GOV.UK. The project has convened 2 national meetings in Feb 2024 and Feb 2025 on agri-biodiversity and forest restoration in Belize, attended by representatives from three government ministries and 10 NGOs that had formerly constituted the National Forest Restoration Taskforce (NFRT). BBG has now been invited to participate in further meetings of this reconvened NFRT. One outcome of the last meeting was the decision by Forest Department to draft a Policy Briefing to government on the need for native planting by smallholders as a strategy for restoring areas with degraded forest cover. A series of articles featuring aspects of the project for different audiences have been published in *Ag4Dev* (climate change and agriculture), in a special edition of the *Darwin Newsletter* on biodiversity for food security, and on the importance of land tenure for smallholder conservation in the journal *Modus* for land managers. A series of 'grower success stories' have been published by RBGE and IIED on their websites and re-circulated by international news outlets. Two illustrative stories are Appendices 5 and 6 of the IIED report. (Annexe 5) 10 new episodes of the popular TV programme '*The Garden Show*' were recorded at BBG using facilities upgraded by this project. All episodes feature the Darwin identity and several promoting agro-forestry feature this native planting project and its smallholders and backyard gardeners. Episodes were transmitted on national TV between Nov-Feb 25, and are now being regularly repeated during prime time viewing. The project has been promoted internationally at various events. Rudy Aguilar, Manager of BBG won the international Marsh Award from BGCI for public education in botany during this project, and presented the project to the 'Botanical Bridges' international conference in Cartagena, Colombia 12-16 Feb. 2024. Many examples of media outputs can be found in Section 15 of this report. Outcome Indicators for numbers of media outputs (DI-C15), numbers of high-level decision makers attending briefing events (Di-C14), and numbers of policies formally contributed to (DI-B12), are all met or exceeded. (Standard Indicators in Annexe 3, table 1)

Output 1. Botanical knowledge broadened.	
Activity 1.1 Training of BBG staff in taxonomy for conservation assessments (by RBGE) and in climate resilient business (by IIED).	Completed in June 2024. Section 1.1 and table 1 of the RBGE report describes the institutional attendees and the topics covered. Due to high demand for this training, capacity was doubled by running the course twice; nevertheless, demand still exceeded this. 64 person days of training were given, exceeding the target of 40 days set for this Indicator Di-A01 for this training output
Activity 1.2, Consultations with ~ 4 beneficiary groups (> 50% female) including subsistence farmers, food producers, landless families, and staff from training and educational institutions, to understand constraints to adopting more diverse growing and to gather knowledge about native plants they wish to grow, by July 2023	Completed. Sections 1.2 and 4.1 of the appended report from IIED detail the surveys of 20 subsistence farmers, pp 4-9 presents an analysis of the main trees and crops grown, balancing this with the challenges they describe to adopting more diverse growing practices. Section 1.2 (tables 2-6) of the appended report by RBGE & BBG summarise the consultations with smallholder farmers, landless backyard gardeners in the Gardens to Go scheme, educators and market vendors to assess which native and other plants are desirable to grow, for reasons such as biodiversity value, shade/shelter, pollination, food security, or income. Several hardwood species were repeatedly highlighted including cedar, mahogany and fiddlewood, as well as regional endemics such as grande betty and black cabbage bark, and the ornamental zericote.
Activity 1.3 Shortlist compared by RBGE with a conservation assessment of ~200 native food-plant, fruit, palm and tree species for contribution to biodiversity, and then by IIED for food security and livelihood benefits. Innovative 'baskets' of 15-30 species selected for trials at BBG by August 2023.	Completed. Section 1.3 of the RBGE/BBG/UoE report summarises the 237 species assessed for their conservation status, rarity, contributions to biodiversity, longevity, drought tolerance etc. The list was analysed further by IIED to identify species valuable for food security, income or livelihood. The same report (included as Annexe 5 to this report) presents example 'baskets' of plants, mixing native and endemic species with other cultivars to provide food or income over a shorter time period. Example 'baskets' are illustrated for both the 'Smallholder' and for the landless 'Gardens to Go' beneficiary groups.
Activity 1.4 Plant nursery, propagation area and training facilities at BBG expanded by August 2023 to increase capacity for propagation, potting and growing and to increase space and enhance educational facilities for training events for TV broadcasts.	Completed. Photographs and logbooks of the nursery planting provided by BBG, and section 1.4 of their report with RBGE, documents the expansion of their nursery and potting facilities from June-December 2023, enabling them to cultivate ~5,000 seedlings between July 2023 to March 2024 and almost 10,000 between April 2024 – March 2025. The expanded nursery capacity will be a source of long-term income for BBG through increased plant sales, enhancing their financial sustainability. The funded improvements also to BBG's Education Centre have provided more secure power and lighting, enabling them to host more training, school visits and other events. BBG now use the Centre for recording the TV show, and since January, over 1,280 children and 480 parents from 16 schools visited the Centre. University groups and our own training activities (1.1) and (4.2) have used the Centre, which stands with the demonstration garden as enduring physical legacies of this Darwin project, enabling further education and training into the future.

Output 2. Native plant propagation skills developed	
Activity 2.1. Network of ~15 seed collectors recruited and trained to begin seed collection by June 2023	Completed. Section 2.1, fig 10 of the appended report by BBG/RBGE, details how 15 students from Galen University and Mopan Technical College were recruited and trained by BBG to collect seed in June 2023. A record of participants is available from dswasey@galen.edu.bz This revealed the need for photographic materials to help learners identify seeds of native hardwoods. Additional training in seed collecting and storage was undertaken during the botanical courses run by RBGE/ BBG in May-June 2024 (activity 1.1). Demand for this training exceeds supply in Belize. A lesson learnt is that seed collection requires collecting trips to be held regularly to find native trees seeding throughout the dry season. This requires co-ordination between NGOs, who cannot always commit staff to seed collecting because staff are often over-committed fighting wildfires at this time.
Activity 2.2. Experimental trials by April 2024 on 20-30 of the target native species, assessing the ease of propagation, survival and drought resistance for herbs, spices, fruits and endangered hardwoods and benefits observed when these are planted out in combination (termed a 'planting basket') in an agroforest system.	Completed – section 2.2 and appendices to the RBGE/BBG report summarise propagation trials on 117 taxa, including 38 native species. Spreadsheets by RBGE and logbooks by BBG document sources of seed or juvenile plants; methods of propagation, and ease/difficulty of growing. Pages 17-20 provide case studies of 10 species from the propagation trials, with full details in Appendix 2.2 The trials continued throughout both years of the project, using the expanded nursery area available in year 2. Although the majority of native plants propagated easily, a few, including fiddlewood were difficult to germinate. For others such as Soap seed, there was a lack of viable seed. Each smallholder received ~ 140 plants from ~ 60 species. Example 'baskets' of plants given to each smallholder are given in the RBGE/BBG report. In table 1, indicator DI-Cxx confirms that propagating 107 species with 38 natives, significantly exceeded the target set of propagating 60 species, with a target of 20-30 native.
Activity 2.3 ~ 20 person-days of horticultural training during year 1, providing 4 beneficiary groups (~24 households, 30% female) techniques including grafting, organic growing, soil and water conservation and innovative mixed planting in agroforestry systems.	Completed. As most beneficiaries could not attend overnight residential training, five, one-day trainings were held at BBG for smallholders and Gardens to Go participants on organic growing, composting, grafting and pruning. 105 person-days of training were given in 5 sessions to 75 men and 30 women, with some people attending multiple sessions, and reaching > 40 separate households. This exceeds both the number of person-days and # households target for activity 2.3. Attendance lists for each of the 5 training sessions are available from BBG.
Activity 2.4 12 Individuals (>30% female) identified in year 1 as 'champion growers' are selected to attend intensive 1-week courses (yr. 2) on e.g., permaculture, organic pest control, seed storage, and trained in plot biodiversity monitoring.	Completed. Given the difficulty for particularly women to attend residential training, this activity was redesigned as a series of site visits to the smallholders, backyard growers and to the staff maintaining the institutional demonstration plots. BBG delivered 70 days of this onsite training in year 2, (36M, 34F) as a more acceptable means of teaching horticultural skills. Section 2.4 of the RBGE/BBG report provides more detail, with the appendix of data collected on each smallholder and backyard gardeners illuminating some of the challenges they had overcome as a result of them receiving timely support and advice from BBG to help them apply the newly learnt techniques.

Output 3. Agroforestry demonstrators established	
Activity 3.1 'Agroforest Garden' created at BBG by April 2024, initially using mature target species presently available, becoming more diverse as it receives planting of 20-30 newly grown species from the target list by December 2024	Completed. One 2-acre demonstration agroforestry garden was created at BBG by October 2023. The plot at BBG (Figure 13A in BBG/RBGE/UoE report) contains 79 trees and plants representing 34 different species in 19 families (Table 9 & Figure 15A). Eleven species are native to Belize. In addition to these structural plants, economically useful climbing and epiphytic plants such as vanilla orchids (Vanilla sp.) and black pepper (Piper nigrum) are grown by using hardwood species as support trees. The signage (Figure 15B) is now in place (Figure 14) and the plot has been visited by over 1,200 school children and about 480 accompanying staff and parents from all districts of Belize as part of 16 school visits to BBG between January and June 2025.
Activity 3.2 Four 1 ha experimental agro-forestry plots are co-designed and landscaped on land of project beneficiaries by December 2023. During 2024. plots enriched with ~ 20 species propagated at BBG, and are maintained to become further demonstration plots by EoP	Completed. Two one-acre educational agroforestry gardens have been installed by BBG at Galen University and Mopan Technical High School in Cayo District. One Agroforestry demonstration plot was established bordering the Vaca Forest Reserve, with co-operation from the NGO Friends for Conservation and Development (FCD) and the Belize Forest Department. (FD). A demonstration backyard garden was created for the British High Commission (BHC) in Belmopan. Across these four further demonstration plots, a total of 334 plants representing 69 species have been planted, of which 27 are native. Sections 3.2.1- 4 of the BBG/RBGE/UoE report provide site designs, planting lists and photographs of the evolution of each site. Galen University has ~ 500 students and their site (Fig 11) is being used by 5 teachers and 20 students from the environmental science programme. The Mopan High School site (Fig 13) is now established as an integral component of the agricultural programme which typically has about 150 students enrolled. FCD manages three protected areas bordering the Selva Maya biodiversity hotspot. They are promoting agroforestry to local landowners in order to reduce clearance of forest for farming and grazing. The FCD plot contains 71 trees and plants from 29 different species (Table 12 and Figure 21A) provided by BBG. Eleven of the species are native to Belize. The plot is currently maintained by FCD, however FCD plan to engage and train local farmers by practising horticultural skills within the demonstration plot; illustrating to them the benefits of agroforestry such as protection from soil erosion, and generating shade and fodder for animals. The backyard garden demonstrator at the British High Commission in Belmopan was most recently completed; this is now producing organic fruit and vegetables and providing a showcase for the project and for traditional foods eaten in Belize and is aimed at visitors to the High Commission, including diplomats. These four demonstration sites aim to establish an enduring legacy for this project. BBG and the institutions have agreed to maintain and use these plots for teaching the principles of agro-forestry to different audiences from school children to college students, smallholder farmers, NGOs and diplomats. They will continue to spread key messaging about native planting for years to come.

Activity 3.3 At least 15 landless local forest households (>50% female) obtain plants, training and ongoing support from BBG to maintain backyard 'Gardens to Go' (G2G), by Sept 2023 and can grow herbs, spices, fibres, and pollinators until and beyond EoP.	Completed. To make the project inclusive to those who did not own their own land, and also to improve gender balance, our beneficiaries were subdivided into 15 smallholder farming households (mostly male heads of household) receiving seedling plants on their own land parcels, and 16 landless households (13 female heads of household) receiving backyard 'Gardens to Go' installations (tools, pots, raised beds, soil mulch, seeds, booklet and access to a programme of support run by BBG over the phone. (Details in Table 15 and Figs 18-19 of BBG/RBGE/UoE report). Smallholder farmers received ~80 plants, comprising a mix of 20-30 species (30% natives) from the baskets of plants listed in the RBGE/BBG/UoE report. G2G participants received 23 packets of seeds from 10-15 species on the same list, excluding tree species due to space constraints. The backyard gardeners had access to the same horticultural training from BBG, and received on-site installation, start-up training and 6-monthly visits from BBG to their own backyard garden spaces.
	Interviews completed mostly on site in March-April 2025 confirmed that all 16 of the G2G's are now growing more plants and a greater variety of plants than they did before starting the project. By EoP all of the participants can now grow plants from seed in trays and transfer to their raised beds. Most participants are now retaining their own seed to plant as the next round of crops. The biggest challenges were those working long and irregular hours, who struggled with frequent maintenance.
Output 4: **Climate resilience capabilities enhanced**	
Activity 4.1 Consultations with 4 beneficiary groups (~24 households ~50% female) by July 2023 to understand present growing systems and the livelihood benefits they may expect currently and from a model of enriched subsistence and commercial use.	Completed. Report from IIED (Appended in Annexe 5 to this report) describes the consultations with the beneficiary groups. In addition to assessing the ~230 plants identified by RBGE in (1.2), a survey tool was developed by IIED and field tested on 23 smallholder households. 15 shorter survey interviews and 8 longer in-depth interviews were conducted to understand present growing systems and possible benefits from enriched subsistence use. The results are summarised in the IIED report in Annexe 5 under sections 1.2 and 4.1. Interviews were analysed to understand grower's preferences for specific trees/crops. IIED report presents an analysis of the main trees and crops grown, and identifies hardwoods, natives and other crops that growers wanted to grow more of. Unsurprisingly, most growers need short-term income from fruits and vegetables, but smallholders particularly have been willing to plant hardwoods and a wider range of native plants in year 2.
Activity 4.2 Up to 4 groups (~50% female) trained and mentored in the resilience benefits of diversified production, sale, organization and management systems (using IIED's *"30 climate resilience*	Completed and expanded. The mid-term project reviewer recommended still delivering this training to the smallholders, even if many would not have grown sufficient produce to sell before EoP. To increase the durability and widen reach, IIED re-designed this as 'training-for-trainers' for restorative agriculture officers and agri-diversity practitioners across governmental, NGO and educational stakeholders, whilst also inviting those smallholders who already or nearly had produce to market. Business training is often more effective when it is delivered in small components, staggered over a year or more, allowing the participants time to reflect and apply the knowledge during the

business options that diversify subsistence use and market commercial options".)	intervening months to their own business ideas. So, the original was divided into two shorter courses, given on August 20-21 2024 and 13-14 Feb 2025, totalling 72 person-days of training and, benefitting 22 men and 14 women and exceeding the target for this [indicator DI-A01] of 40 days. Between the two courses, smallholders and their supporting NGOs worked to undertake 'homework' in the form of activities 4.3 and 4.4 described below, which prepared them for the second course. Section 4.2 of the appended IIED report describes the first course 'Making a business of Agroforestry', explaining the audience and the innovative course structure. A highlight of the course were the practical examples from entrepreneurs who had successful local businesses.
Activity 4.3 Locally-led assessments of markets for surplus produce for up to 6 food plants being grown by the project participants by December 2024 ,	The first training gave smallholder agroforestry farmers the idea that, to develop a business, it is first necessary to do some market research. Between the two training courses, participants researched their particular business interests and identified by December 2024 potential local markets, looking at what potential buyers wanted, and what existing competitors existed. The smallholder growers worked with their local NGO (either BBG, Belize Maya Forest, or FCD) to conduct these market assessments. Photo 4 in section 4.3 of the IIED report confirms that a range of crops were investigated including 6 food plants (meeting the target for activity indicator 4.3) - cocoa, bread nut, bottled habanero chilli, fruit juice (soursop) and jams (passion fruit, pitaya). Initial market ideas were then brought to the second training course for presentation, discussion and refinement,
Activity 4.4 Promotional materials for 3 existing/potential food products highlighting to local buyers both the livelihood and biodiversity benefits of sourcing locally from enriched agroforestry systems, by Dec 2024.	To help smallholder agroforestry farmers develop promotional materials for their food products (an issue emerging from discussions with farmers in the first training) it was decided that the second training course should develop smallholders thinking in relation to marketing and labelling. This second training was also strongly encouraged by the mid-term independent reviewer. IIED developed and delivered the training at BBG on 13-14 February 2025 to 18 participants on 'Marketing and labelling agroforestry products' with participants again being a balanced mix of smallholder farmers, technical staff from their assisting NGOs, and project and government staff. Photos 4 and 5 of the IIED report show 4 examples of marketing ideas for potential food products developed by the smallholders in activity 4.4. Attendance lists for both courses were taken daily and are available on request. Table 1 in Annexe 3 (Standard Indicators) gives the numbers of beneficiaries, disaggregated by gender for all project training indicators.
Output 5: Biodiversity restoration practices promoted widely	
Activity 5.1 Training resources incorporated into courses on agroforestry at technical colleges and university.	Initial consultations took place in year 1 with Mopan Technical High School, Galen University and University of Belize, who all attended meetings to identify relevant courses and programmes that could use these resources Further meetings took place on 19th August 2024 and 6th February 2025 between UoE, IIED and BBG with the Provost of Galen University, Cynthia Aird, the Dean of

	Science of Galen University, Dr Sherry Gibbs and the Head of the Environmental Science Dr Denaie Swasey as well as with Anita Ochaeta, Head of the Agriculture at Mopan Technical HS. Outcomes were (1) for Galen and Mopan to confirm their intention to maintain their demonstration agroforestry plots and utilise them in teaching for the foreseeable future; (2) Dr Swasey to confirm that ~20 students per year will use and maintain the Galen plot as part of a new module in agro-forestry she is designing, which will also use wider project findings and materials such as the infographics and planting lists illustrated in table 12 and figure 12 of the BBG/RBGE/UoE report; and (3) for Ms Ochaeta to confirm that the demonstration plot at Mopan will be a central resource for many of the ~150 students enrolled annually on the agriculture programme. Correspondence by UoE with these educational partners is available on request to verify these agreements.
Activity 5.2 Production and broadcast of up to 10 new episodes of '*The Garden Show*' on Cayo TV, showcasing growing the native species, and their uses in cooking, during 2024.	10/10 new episodes of the popular TV programme 'The Garden Show' have been recorded at BBG's new Education Centre, upgraded with funds from this project, and broadcast on the National Channel from November 2024 to January 2025. Two specific episodes focus specifically on the benefits of growing native species, and practical tips how to set up your own agroforestry area. The programmes were broadcast twice a week, and are now being re-shown about once a week, as they are proving popular. This additional broadcasting is providing excellent value for money, giving the project a high level of exposure to the general public. BBG are reporting increased bookings for Garden tours, with visitors mentioning the TV coverage. Section 5.2 of the RBGE/BBG/UoE report contains broadcast schedule, screen-shots showing Darwin Identity on all episodes filmed at BBG's Education Centre, upgraded with project funding. Links to example episodes are in section 14. .
Activity 5.3 Materials promoting growing, eating, cooking and other uses for native species, by December 2024.	Several TV episodes feature native plants, with one episode on cooking with native vegetables Chaya (*Cnidoscolus aconitifolius*), All Spice (*Pimenta dioica*) and Bay Leaf (*Sabal mauritiiformis*). An IIED project webpage was prepared for the project (IIED report, page 42) along with a blog showcasing the example of two sisters, Alice and Amelia (p 44). The blog described how this innovative project is working with those sisters to grow more nutritious local foodplants, spices and endangered timber trees using smallholder agroforestry plots. Further examples are in Section 14. To meet demand for printed material, BBG re-published their popular book, 'Growing with Native Plants'. Instead of the creating a new cookbook to promote dishes using native species, we sourced an existing book produced by women from a nearby community. BBG have been selling this, with profits going to the authors, to encourage them to continue updating the booklet in future.
Activity 5.4 Project findings shared through National Biodiversity Office (NBIO) and promoted internationally as an innovative, scalable scheme in which botanical gardens provide	NBIO was one of over 20 national institutions, including three government departments attending a briefing event on project findings hosted by the British High Commissioner in the capital, Belmopan on 6th February 2025. The project was also presented to a consortium of 10 international NGOs (including WWF, WCS, TNC) and other members of the Biodiverse Landscape Fund (BLF) for Meso America, in Guatemala City on 24th February 2025. BBG have subsequently been invited by WWF to tender for a project to propagate plants to restore Dalbergia across Belize and Guatemala.

training and resources, enabling smallholders to trial more diverse growing by EoP. Grower ‘success stories’ have been widely shared and used to encourage further uptake of training across Belize Belize’s national forest restoration taskforce lobbied to resource and upscale this scheme,	Project activities have been widely publicised through Darwin newsletters, social media, blogs on both RBGE and IIED websites, and through press releases co-ordinated by the High Commission in Belize and as world new stories on gov.uk. RBGE featured the project twice as part of their ‘Botanical Stories’ series, one entitled ‘*Rare skills for rare plants’* discussing the need to spread knowledge to help people identify and cultivate native plants. IIED published a blog to coincide with international coffee day, showing how the project’s smallholder farmers grow coffee by intermixing it as just one component of a broader agro-forestry system, rather than as a single cash crop. The project convened two annual meetings of Belize’s National Forest Restoration Taskforce in the capital Belmopan on 7th Feb 2024 and 6 Feb 2025 with 20 key stakeholders including 3 government departments, 10 NGOs and academic institutions promoting agroforestry in Belize. Re-invigorating this forum, the meetings enabled us to showcase how the innovative approach pioneered by BBG could be central to Belize’s Forest Landscape Restoration (FLR) strategy to achieve the pledge made in response to the Bonn Challenge. In collaboration with the Forestry Department, a policy brief was prepared linking the projects achievements into the implementation of national policies such as Belize’s National Agriculture and Food Policy 2015–2030, the National Agroforestry Strategy 2022 and the National Landscape Restoration Strategy 2022–2030.

Annex 2 Project's full current logframe as presented in the application form (unless changes have been agreed)

Project Summary	Measurable Indicators	Means of Verification	Important Assumptions
Impact: Restoration of local biodiversity and more climate-resilient livelihoods through innovative planting combinations that mix diverse and nutritious foodplants, spices, and endangered trees in communities bordering the Selva Maya biodiversity hotspot.			
Outcome (30 words): Opportunities for growing more novel combinations of local foodplants, spices and CITES-listed trees within smallholder agroforestry are evidenced and widely spread, with baseline data on biodiversity and climate-resilient livelihoods collected.	0.1 Use and value of ~100 native foodplant, fruit, spice, palm and tree species assessed by 4 main beneficiary groups (>50% female) and combined with assessments of biodiversity and livelihood contribution, to select 'baskets' combining 15-30 species for propagation and growing trials in expanded nurseries at BBG by August 2023. 0.2 Propagation and growing trials conducted in an expanded nursery at BBG on ~30 native species by July 2024. (2 examples of mixed baskets of 15 species provided in additional materials uploaded.) In parallel, 4 beneficiary groups (~24 households, 50% women) receive bespoke horticultural training at BBG, gaining skills to begin planting their own agroforest plots with the target native species. emerging as most successful from these trials by March 2024.	0.1 Database of native species, CITES listing, IUCN conservation status, rarity, pollination role, ecological importance, nutritional value, climate resilience and markets for produce surplus to subsistence need. Report summarising native species identified by the communities, disaggregated by gender, from which ~30 target species are then selected for a combined potential to meet needs for biodiversity, food security and livelihood. 0.2 Monitoring of the trials on targeted native species (indicators such as % survival during stages of growth) Reasons for adoption of species (or not) by the subsistence growers, backyard gardeners and educational gardeners, will be monitored continuously using records of seedling uptake and feedback obtained from training sessions; summarised in a written report by Dec 2024. Participants will also report results of a baseline survey of agro-biodiversity on the plots they have established by EoP.	Assumes no severe risks such as hurricanes, market collapse, or a pandemic prevents progress. 0.1 'Planting–basket' concept promotes ideas of diversity, enabling both genders to contribute to a 'long-list', from which shortlist of 10-30 species will be selected for seed collecting and propagation trials. 0.2 assumes a sufficient number of the native species in each 'planting basket' can be propagated and grown on successfully. Small trials by BBG suggest at least some native species that are threatened or overexploited in the wild can be propagated and grown in their nurseries. Failures are also anticipated and we will learn from these which species may be less viable to propagate, grown on or plant out together in agroforestry. There is a moderate risk of some beneficiaries 'dropping out' of the scheme. This risk will be reduced by making access to further resources dependent on regular monitoring and reporting.

	0.3 Demonstration 'Agroforestry Garden' created at BBG by October 2023. At least 4 experimental agro-forestry plots co-designed on land of project beneficiaries and enriched with native species propagated at BBG, and, towards EoP, by the beneficiaries themselves. 0.4 '*Risk to resilience'* training given in 3 periods over 2 years by IIED to the 4 beneficiary groups (>50% female), enabling them to learn how to assess and enrich subsistence and commercial livelihoods; the training explores 30 options for diversifying on-farm ecology, economic production, marketing and labelling of surplus food, spice and craft, and social cooperation structures. 0.5 Public awareness of benefits of growing a greater diversity of native species, by upscaling familiar home-gardening principles, is raised through media campaigns	0.3 Plans of the demonstration garden and the experimental plots, detailing species used, landscaping and planting to enhance biodiversity and conserve soil and water. Progress tracked using photographs evidencing initial planting in 2023 and development through 2024. 0.4 Attendance lists, materials from *risk to resilience training;* market assessment report for ~6 products by Dec 2024 and promotional material for 3 new or existing products from plants in the target species list, by EoP. Evidence of understanding risk and benefits tracked using a survey tool developed by IIED, applied before/after the training programme. 0.5 Minutes of meetings with Ministries of Education and Sustainability by June 2023; schedules for TV shows by Dec	0.3 The garden demonstrates the vision and evidences the viability of the project ideas, both to beneficiaries (who will use it during training) and also to the wider public and government. BBG will maintain the garden beyond EoP so benefits arising as the planted native species mature to yield fruits, fibres and shelter continue to be monitored. By having a working example of an enriched agro-forestry landscape in which to train, the beneficiaries gain skills and the confidence to propagate, plant and grow a greater diversity of native plant species on their own experimental agro-forestry plots. 0.4 intends to enhance capacity for climate resilience – i.e., people's capability to persist, adapt or transform their livelihood options in the face of changing climate. Mentoring explores how to make this transition through ecological, economic, social and technological diversification. We also explore the climate risks from 'business as usual' growing with only limited species diversity. Some growers may seek greater climate-resilience in subsistence systems. Others to produce a surplus for sale. Both can benefit from learning to manage risk and

	and educational visits to the new agroforestry gardens, by EoP. BBG is recognised for its enhanced capability and capacity to support more diverse agroforestry and landscape restoration practice nationally and internationally, by EoP.	2023; evidence of BBG's inclusion into the National Forest Restoration Taskforce by April 2024; techniques for diverse growing incorporated into horticulture and agriculture courses at technical colleges by EoP.	better understand how to build resilience through diversification. Since tourism markets are still recovering post-COVID, we will focus on a species-diverse, organic approach to improve quality, and branding & marketing to raise the price of produce to be sold to known domestic markets. 0.5 we assume that raising public understanding of the benefits of growing native food plants, and then by offering resources and training, a set of committed trainee growers are supported to form networks to upscale home-gardening and to diversify their growing in larger agroforestry plots. With initial evidence gained suggesting the potential for the approach to be replicable across the country, BBG can then lobby government for further resources to expand the scheme as part of a community-led approach to forest landscape restoration.
Output 1. Botanical knowledge broadened. Institutional capability of Belize Botanic Garden increased by training from RBGE in taxonomy for conservation assessments, and by expanding capacity at the BBG plant nursery.	1.1 Training of BBG staff in taxonomy for conservation assessments (by RBGE) and in climate resilient business (by IIED). 1.2 Consultations with ~ 4 beneficiary groups (> 50% female) including subsistence farmers, food producers, landless families, and staff from training and educational institutions, to understand constraints to adopting more	1.1 Attendance logs, certificates of course completion for individuals and course booklets. 1.2 Records summarising the opinions of the attendees from the different beneficiary groups, disaggregated by gender and type of use (for subsistence, for profit, for fibre, medicinal, education, etc.).	We expect sufficient consultees can be reached by using the existing outreach networks of BBG and its other local partners (Belize Zoo; Tropical Education Centre; Galen University and Mopan Maya Technical college.) Consultees are able to agree on native species to be trialled. The

Interests of local communities in growing innovative combinations of foodplant, fruit, spice, palm and endangered tree species is understood. Information from 4 community groups (>50% female) combined with assessments of biodiversity and livelihood contribution, to select 'planting-baskets' of 15-30 species for nursery trials at BBG by August 2023.	diverse growing and to gather knowledge about native plants they wish to grow, by July 2023 1.3 Shortlist compared by RBGE with a conservation assessment of ~200 native food-plant, fruit, palm and tree species for contribution to biodiversity, and then by IIED for food security and livelihood benefits. Innovative 'baskets' of 15-30 species selected for trials at BBG by August 2023. (2 examples of mixed baskets of 15 species provided in additional materials to illustrate possible 'planting-basket' compositions) 1.4 Plant nursery, propagation area and training facilities at BBG expanded by August 2023 to increase capacity for propagation, potting and growing and to increase space and enhance facilities for recording of 'hands-on' training events for wider broadcast.	1.3 Database of ~200 plant species' IUCN conservation status, rarity, pollination role, ecological importance, nutritional value; climate resilience and local markets for any produce grown that is surplus to a grower's subsistence needs. Report summarising rationale for the target species identified as more suitable for propagation trials based on their combined scope to meet needs for biodiversity, food security and livelihood enhancement. Summary of 'Baskets' of native palms, fruits and spices along with native hardwoods recommended, based on the propagation trials, for planting and growing in the agroforestry demonstrator garden and trial plots of beneficiaries. 1.4 Plans for the expanded nursery and training facility. Photographs before and after the improvements.	'basket' approach enables this, since diversity is encouraged, so a mix of plants serving different needs, including food, shelter, biodiversity, etc can be identified by women and men. 1.2 After ensuring nutritional needs are supported within each basket, we propose adding some CITES-listed and overharvested native species into each planting basket. (e.g., Prickly Yellow (EN), My Lady (NT); Cedar (VU) Rosewood (CR), Mahogany (VU). Although new tree saplings will not produce yields in the short-term, more mature specimens from existing nurseries can be planted for demonstration plots, enabling trainees to explore the benefits of mixed systems.
Output 2. Native plant propagation skills developed Propagation trials on 20-30 more novel native species, providing a more diverse basket of plants for growing in mixed agroforestry landscapes.	2.1 Network of ~15 seed collectors recruited and trained to begin seed collection by June 2023 2.2 Experimental trials by April 2024 on 20-30 of the target native species, assessing the ease of propagation, survival and drought resistance for herbs, spices, fruits and endangered hardwoods and benefits observed when these are	2.1 Directory of members in the seed collecting network; records of volume, quality and timing of seed collection for each target species. 2.2 Nursery records of numbers of plants successfully grown. Regular, monthly monitoring of the trials on the target species by BBG staff, recording indicators such as % seed germination; % survival at various stages of growth. Cases of failures	Sufficient numbers of seed collectors can be recruited for the training, by using the existing outreach networks of BBG, TEC. local universities and technical colleges. Many of these will be beneficiaries of the project and hence are incentivised to collect. No major droughts, extreme weather events or fires cause

Enhanced environmental resilience of beneficiaries to climate change, by building technical skills in organic horticulture, permaculture and pest control, enabling innovative mixed planting and growing of more diverse species on their own agroforestry plots.	planted out in combination (termed a 'planting basket') in an agroforest system. 2.3 20 days of bespoke horticultural training during year 1, providing 4 beneficiary groups (~24 households, 30% female) by BBG in techniques including grafting, organic growing, soil and water conservation and innovative mixed planting in agroforestry systems. 2.4 12 Individuals (>30% female) identified in year 1 as 'champion growers' selected to attend intensive 2 x 1-week courses (yr. 2) on permaculture, organic pest control, seed storage, and trained in plot biodiversity monitoring.	also recorded, and adaptions to the trials made as a consequence. 2.3 Attendance logs. Certificates of course completion for individuals. 2.4 Attendance logs. Certificates of course completion for individuals. Participant lists; records of training and notes from follow-up monitoring visits to the individual plots by BBG/ extension officers.	large-scale damage to nurseries or death of saplings. We assume that a sufficient number of the species in each 'planting basket' can be grown successfully in sufficient volume to supply the demonstration gardens. This is based on limited evidence to date with mostly some native fruits, spices and foodplants such as *Granadillo, Cortez, Achiote and Copal, Chaya & Jicama,* traditionally eaten in Belize. Nevertheless, initial trials by BBG with a sample of native trees have yielded some positive results with some less cultivated, but threatened native species, such as *Prickly Yellow, Copal, Cedar, Black Cabbage Bark, Emery and Waha leaf, as well as more common Cohune and Bay Leaf* (valued for building, thatching and fibre),
Output 3. Agroforestry demonstrators established. Creation of main Demonstration Agroforest Garden at BBG and > 4 experimental plots on land of project beneficiaries.	3.1 'Agroforest Garden' created at BBG by April 2024, initially using mature target species presently available, becoming more diverse as it receives planting of 20-30 newly grown species from the target list by December 2024. 3.2 4 x 1 ha experimental agro-	3.1 Plans of the demonstration garden, presenting the target species in innovative planting combinations, with landscaping to create an enriched agroforestry system, enhancing biodiversity and conserving soil and water. 3.2 A series of photographs will evidence progress from marking-out, landscaping, initial planting in 2023	3.1 The demonstration garden is the project's 'vision', evidencing the viability of the innovative planting system both to the beneficiaries (who will use it in their training) and also to the wider public. It will evolve during and beyond the project, as more species are planted and mature. BBG will maintain the garden afterwards,

	forestry plots co-designed and landscaped on land of project beneficiaries by December 2023. During 2024. plots enriched with ~ 20 species propagated at BBG, and are maintained to become further demonstration plots by EoP. 3.3 At least 15 landless local forest households (>50% female) obtain plants, training and ongoing support from BBG to maintain small backyard 'Gardens to Go' (G2G), by Sept 2023 and grow herbs, spices, fibres, and pollinators *such as Epazote, Ricardo, Achiote, Chaya, JippiJappa palm and Titonia until and beyond EoP.*	and further development throughout 2024. Parts of the garden will be featured in the TV show (output 5) during 2024. Plans and planting lists for each plot provided by December 2023. Photographic monitoring of the plots quarterly during 2024, with a baseline report by EoP on the plot biodiversity using indicators than can be easily reported by beneficiaries (e.g., species richness), and can be compared with a nearby plot that is still planted conventionally. 3.3 Participant lists; records of training and notes from follow-up support and monitoring. Online 'awards of growing competence' to those sharing their success stories on social media.	so longer term benefits as the garden produces fruits, fibre, etc, are demonstrated and monitored. BBG will train a range of other local organisations, with places also offered to extension officers in Forestry and Agriculture Depts, to build a network for upskilling subsistence growers, expanding the national training capacity and physical project legacy. Training will also be given to individual subsistence farmers with a capacity and commitment to become exemplar 'champion growers' who can inspire others by their success. 3.3 Growing herbs, spices and pollinators is a traditionally female occupation in Belize. G2G will create networks of women interested in growing and eating native plants, and enabling those without land to participate.
Output 4. Climate resilience capabilities enhanced More climate resilient livelihood opportunities for the beneficiaries, through training in 'risk to resilience' and mentoring to understand the benefits of an enriched agroforestry	4.1 Consultations with 4 beneficiary groups (~24 households ~50% female) by July 2023 to understand their present growing systems and the livelihood benefits they may expect currently and from a model of enriched subsistence and commercial use. 4.2 Up to 4 groups (~50% female) trained and mentored during 2024	4.1 Attendance lists and notes from the consultation.	Some smallholders may be growing only for greater food security or resilience to climate shocks. Others may hope to produce a surplus for sale, by improving quality of produce and marketing. Both groups can benefit from learning to manage risk and benefits from a more diverse system.

system (through e.g., reducing input costs via substitution of chemical fertilisers and increased marketing of saleable foods, spices and craft products).	in the resilience benefits of diversified production, sale, social organization and management systems (using IIED's *"30 climate resilience business options that diversify subsistence use and market commercial options*".) 4.3 Locally-led assessments of markets for surplus produce for up to 6 food plants being grown by the participants by December 2024. 4.4 Promotional materials for 3 existing/potential food products highlighting to local buyers both the livelihood and biodiversity benefits of sourcing locally from enriched agroforestry systems, by Dec 2024.	4.2 Attendance lists and training materials on risk assessment and climate resilience through diversified business organization from IIED 4.3 reports on the markets for the products 4.3 Basic market assessment report for up to 6 plant foods, including findings from consultative workshops with farmers and producers, market research and knowledge of similar products in other countries. 4.4 Examples of materials created for 3 plant-based products with development potential. e.g., adverts on social media, or physical pamphlets for distribution at farmers markets, and trade fairs. Products may also be featured on the TV Garden show (5.3)	BBG have identified groups within their communities with business ideas. The groups will either include or work with the subsistence growers involved in outputs 1-3. Involvement in developing new or existing small business groups will be voluntary As tourism markets are still recovering after COVID, we will focus on how a more diverse, organic approach can improve quality, and apply branding and marketing to raise the price of produce that can be sold to known domestic markets
Output 5. Biodiversity restoration practices promoted widely. All partners raise awareness about the benefits of innovative planting to enhance biodiversity, strengthen climate-resilience, and create livelihood opportunities, through a co-ordinated series of TV programmes, visits to demonstration gardens at BBG and partner sites and 'success stories' shared on social media, and YouTube.	5.1 Training resources available online, incorporated into courses on agroforestry at technical colleges and university, by EoP. 5.2 Production and broadcast of up to 10 new episodes of '*The Garden Show*' on Cayo TV, showcasing growing the native species, and their uses in cooking, during 2024. 5.3 Materials promoting growing, eating, cooking and other uses for native species, by December 2024. 5.4 Project findings shared through National Biodiversity Office and promoted internationally as an innovative, scalable scheme in	5.1 copies or clips of the training resources shared online. 5.2 broadcast schedule, showing transmission dates and details. Recordings of sample episodes. Estimated viewer numbers by the TV company. 5.3 Examples of the success stories cook-books and recipes promoted on TV, and made freely available online. Analytics on number of downloads, or requests in responses to campaigns. Numbers of hardcopy	5.1 Belize's new National Landscape Restoration policy recommends technical colleges increase training in horticultural skills such as plant propagation. 5.2 Cayo TV are willing to produce another series of the Garden Show with BBG, as the previous series was popular. 5.3 With the economic downturn, and rising food costs there is increased interest in home-gardens, growing native species that require less inputs. 5.4 Evidence demonstrating how enriching agri-diversity can lead

Through this process, BBG becomes a node for Belize in national and international agroforestry and landscape restoration initiatives in Central America.	which botanical gardens provide training and resources, enabling smallholders to trial more diverse growing, with lower risk, by EoP. Belize's national forest restoration taskforce lobbied to resource and upscale this scheme, with adverts for further training courses to encourage further uptake of training across Belize by Dec 2024.	versions of cook-books distributed to communities without internet access. 5.4 minutes of meetings and other interactions with NBO, AMPB, government of Belize Depts of Forestry and Agriculture, etc. Briefing note to lobby government departments to further resource and up-scale the model beyond EoP. Press releases of the 'success stories'. Adverts for further training courses at BBG and partner sites.	to reported improvement in food security, greater resilience to climate change, and in some cases also improve livelihoods, is expected to encourage a wider uptake of the enriched model by subsistence farmers and women in similar villages across Belize. Belize's Forest Restoration Taskforce needs organisations such as BBG to share expertise in native plant horticulture that will underpin the diversification of growing that is required. By demonstrating the viability of the pilot project and potential for the scheme to be replicated at scale, we will lobby government to seek additional resources based on this initial proof of concept; We will show how it provides a route to community implementation of their National Agroforestry and also the Forest Restoration Strategy, and helps fulfil Belize's Bonn Challenge and 20x20 commitments.

Activities (each activity numbered according to the output that it contributes towards, for example 1.1, 1.2 and 1.3 contributing to Output 1)
1.1 Training of BBG staff by RBGE in plant taxonomy, conservation assessment and biodiversity monitoring, and by IIED in incubating small climate-resilient businesses.
1.2 Consultations with ~ 4 beneficiary groups (> 50% female) to understand constraints to adopting more diverse growing and gather knowledge on food plants they wish to produce, by July 2023
1.3 Conservation assessment of by Aug 2023 of ~200 local food plant, fruit, palm and tree species for biodiversity, food security and livelihood benefits.
1.4 Plant nursery and potting facilities at BBG expanded by August 2023
2.1 Network of ~ 15 seed collectors recruited and trained to begin seed collection by June 2023
2.2 Experimental trials by April 2024 on 20-30 of the target species, assessing ease of propagation, survival and drought resistance
2.3 20 days of bespoke horticultural training during year 1, providing 4 beneficiary groups (24 households, 30% female) by BBG
2.4 12 Individuals (>30% female) identified in year 1 as ‘champion growers’ selected to attend intensive 2 x 1-week courses in April 2024.
3.1 ‘Agroforest Garden’ created at BBG by October 2023
3.2 4 x 1 ha experimental agro-forestry plots co-designed and landscaped on land of project beneficiaries by December 2023.
3.3 At least 30 landless local forest users (>75% female) obtain plants, training and ongoing support from BBG to maintain backyard ‘Gardens to Grow’
4.1 Consultations with 4 groups (~24 households ~50% female) by July 2023 to understand their present growing systems and the livelihood benefits
4.2 Up to 4 groups (~50% female) trained and mentored during 2024 in the resilience benefits of diversified production, and sale of diversified produce.
4.3 Locally-led assessments of markets for surplus produce for up to 6 food plants by Dec 2024.
4.4 Promotional materials for 3 existing/potential food products by Dec 2024
5.1 Training resources published online during 2024, incorporated into courses on agroforestry at technical colleges and university, by EoP
5.2 Production of up to 10 new episodes of ‘The Garden Show’ on Cayo TV, showcasing the native species, uses in cooking, etc. during 2024.
5.3 Materials promoting growing, eating, cooking and other uses for the target native species, by EoP.
5.4 Project findings shared and promoted internationally as an innovative, scalable scheme; lobby government to expand the scheme by Dec 2024

Annexe 3 Table 1 Project Standard Indicators

DI Indicator #	Name of indicator using original wording	Name of Indicator after adjusting wording to align with DI Standard Indicators	Units	Disaggregation	Year 1 Total	Year 2 Total	Overall (M/F)	Target
DI-A01	People attending structured training on seed collecting/ native tree identification and seed collecting.	Numbers of stakeholders attending training at BBG on seed collecting and native tree identification.	Farming household FHHs Training days	Smallholder 'Gardens to Go' Government/NGO Teacher/ student Total (M/F)	12 (8/4) x0.5 12 (4,8) x0.5 0 15 (8,7) x1 27 (20,19)	- - 20 (13/7) - 40 days	44 (29,15) 67 days	40 60
DI-A01	People attending structured training on planting and growing of native species	Numbers of stakeholders attending structured horticultural training at BBG on planting and growing of native species	Farming households FHHs Training-days	Smallholder 'Gardens to Go' Government/NGO Teacher/ student Total M/F Total Days	25 (20,5) 20 (5,15) 0 5 (1,4) 45 FHHs (25,20) 105 days (75,30)	15 smallh half day x 4 / = 30 days (6F) 16 x 3 = 48 / 2 24 days (20F) Demoplots 15 days (8F) 70 days (36,34)	50 (26,24) 175 days (111, 64)	24 (30% F) 80 days
DI-A01	People attending structured training on developing an agribusiness	# of stakeholders attending structured training from IIED on agribusiness	Individuals Training-days	Government/NGO Teacher/ student Champion Grower Total M/F Person-days	10 (7, 3) 8 (5,3) 18 (12,6) 36	8 (5,3) 2 (1,1) 8 (4,4) 18 (10,8) 36	18 2 16 36 (26,12) 72 days	20 40

DI Indicator #	Name of indicator using original wording	Name of Indicator after adjusting wording to align with DI Standard Indicators	Units	Disaggregation	Year 1 Total	Year 2 Total	Overall (M/F)	Target
DI-A01	Numbers of people attending consultative workshops on agro-forestry	# of government /NGO stakeholders attending national workshops on AF for forest restoration	People	Government/NGO Teacher/ student Champion Grower Total M/F	16 (8,8) 4 (0,4) 20 (8, 12)	18 (17,1) 2 (0,2) 20 (17,3)	40 (25,15)	40
DI-A03	Number of local/national organisations with improved capability and capacity as a result of project.	Number of local/national organisations with improved capability and capacity in AF as a result of project.	Number of organisations	Government NGO Educational Total	0 2 2 4	2 2 2 6	2 4 4 10	8
Di-A04	Number of people reporting that they are applying new capabilities (skills and knowledge) 6 (or more) months after training.	People applying (or teaching others) more diversified growing capabilities (skills/ knowledge) 6 months after training.	People	Smallholder 'Gardens to Go' Government/NGO Teacher/ student Total M/F	4 (2,2) 4 (1,3) 0 3 (0,3) 11 (3,8)	11 (10,1) 12 (3,9) 7 (4,3) 2 (0,2) 32 (17,15)	15 16 7 5 43 (22,21)	40
Di-A05	Number of trainers trained reporting to have delivered further training by EoP.	Number of trainers trained reporting to have delivered further training by EoP	People (individuals)		0	20	20 (12,8)	20
Di-B09	Number of individuals / FHHs reporting livelihood improvement as a result of project activities.	Number of individuals / FHHs reporting adoption of new growing activities as a result of project activities.	People/ Farming House holds	Smallholder 'Gardens to Go' Teacher/ student NGO staff Total M/F	4 (2,2) 4 (1,3) 2 (0/2) 0 10 (3,7)	11 (10,1) 12 (2,10) 2 (1,1) 7 (4,3) 32 (17, 15)	15 (12,3) 16 (11,4) 4 (1,3) 7 (4,3) 42 (20,22)	40

DI Indicator #	Name of indicator using original wording	Name of Indicator after adjusting wording to align with DI Standard Indicators	Units	Disaggregation	Year 1 Total	Year 2 Total	Overall (M/F)	Target
DI-B12	Number of policies developed or formally contributed to by project and being implemented by appropriate authorities.	Number of policies developed or formally contributed to by project and being implemented by appropriate authorities.	number	International National Subnational	0 1 1	0 1 1	4	4
DI-C04	New assessments of community use of biodiversity resources published.	New assessments of community use of native plants and trees published.	Number		2	1	3	2
Di-C14	Number of high level decision-makers attending briefing events	Number of decision-makers attending briefing events	Number of individual DMs reached		20 (14/6) 3 (0,3) 23 (14,9)	20 (17,3) 20 (12,8) 10 (6,4) 4 (0,4) 54 (35,19)	77 (49,28)	40
DI-C15	Number of media related activities.	Number of Media related activities.	Number	Activities recorded/broadcast on national TV Events /blogs streamed or published on internet	8 6	2 6	10 12	10 12
Di-CXX	Number of species grown in	Number of species	Number	Native Other		22 51	35 80	

DI Indicator #	Name of indicator using original wording	Name of Indicator after adjusting wording to align with DI Standard Indicators	Units	Disaggregation	Year 1 Total	Year 2 Total	Overall (M/F)	Target
	propagation trials in new nursery facilities	successfully grown in propagation trials		Total	13 29 42	73	105	 60 (30 native)
Di-CYY	Number of AF installations established by project	Number of AF installations established by project	Number	Demonstration Gardens/ plots Smallholder plots Gardens to Go installations	4 15 15	1 1	5 15 16	4 15 15
DI-C17, C18, C19	Number of publications produced.	Publications produced or submitted for publication.	Number	Policy Briefs Press packs/ blogs Technical reports Draft articles	0 4 2 0	1 4 1 1	1 8 3 1	1 6 2 1
DI-D02	Number of farming families whose disaster/climate resilience has been improved.	Number of FFs who report their climate resilience or food security has been improved by EoP.	families reporting improved resilience to each risk by EoP	Smallholder G2G food security water security (smallholder only) fire resilience s/o Total (M/F)	 smallholder only	15 (12, 3) 16 (3, 13) 31 (15, 16) 4 (2,2) 7 (5,2) 31 (15, 16)	15 (12, 3) 16 (3, 13) 31 (15, 16) 4 (2,2) 7 (5,2) 31 (15, 16)	 30
Di-D05	Number of people supported to better adapt to climate	Number of people supported to better adapt to climate change as a result	Number of family	Smallholder 'Gardens to Go'	60 (28,32) 30 (10,20) 0 5 (0,5)	85 (20,65) 74 (25, 49) 15 (5, 10) 40 (18, 22)	145 104 15 45	

DI Indicator #	Name of indicator using original wording	Name of Indicator after adjusting wording to align with DI Standard Indicators	Units	Disaggregation	Year 1 Total	Year 2 Total	Overall (M/F)	Target
	change as a result of the project [ICF KPI 1].	of the project [ICF KPI 1].	members benefitting	Government/NGO Teacher/ student Total M/F	95 (38,57)	204 (68, 136)	309 (106,203	200
Di-D10	Area of improved sustainable agriculture practices benefitting people to be more resilient to weather shocks and climate trends.	Area of improved agriculture practices benefitting people to be more resilient to weather shocks and climate trends.	Number of individual gardens or plots Total area acre	Demonstration Gardens/ plots Smallholder plots Gardens to Go Total	3 x 1.5 = 4.5 acres 15 x 1.5 = 22.5 acre 15 = 1 acre 33 plots 28 acres	+2 =2 acre +5.0 acres +1 plot +3 plots 7.5 acres	36 plots 35 acres	30 plots 30 acre

Annexe 3 Table 2 Publications

Title	Type (e.g. journals)	Detail (authors, year)	Gender of Lead Author	Nationality of Lead Author	Publishers (name, city)	Available from (e.g., weblink or publisher if not available online)
Worst fire season shows the urgency of training in plant identification skills	Magazine/ Blog	Goodwin, Zoe 2024	F	UK	Royal Botanic Garden Edinburgh	https://stories.rbge.org.uk/archives/39341
The benefits of backing family agroforestry businesses – food for thought	Online News/ blog	Macqueen, Duncan 2024	M	UK	IIED	https://www.iied.org/benefits-backing-family-agroforestry-businesses-food-for-thought
Rare Plants and Rare Skills	Magazine/ Blog	Goodwin, Zoe 2024	F	UK	Royal Botanic Garden Edinburgh	https://stories.rbge.org.uk/archives/38824
Growing the potential of planting baskets	Darwin Newsletter	Stuart, Neil 2024	M	UK	BCF Comms	https://www.darwininitiative.org.uk/news/2024/01/27/growing-the-potential-of-planting-baskets/
Grow Native Belize: a gardener's guide to using native plants	Booklet	Belize Botanic Gardens	-	Belize	Belize Botanic Gardens	Reprinted. Sold in shops throughout Belize, BBG store in San Ignacio.and at Belize Botanic Gardens.
Fruits, roots and shoots – using tropical plants for self-sufficiency (2/ed)	Booklet	Maria Benque 2024/ 2e	F	Belize	Belize Botanic Gardens	Reprinted. Sold in shops throughout Belize, BBG store in San Ignacio.and at Belize Botanic Gardens.
The Darwin 'planting basket' project at Belize Botanic Gardens	International Conference Presentation	Aguilar, Rudy, 2024	M	Belize	Botanic Gardens Conservation International	https://www.bgci.org/news-events/2024-botanical-bridges-congress/
The Darwin Initiative: boosting biodiversity worldwide	Journal MODUS	Stuart, Neil 7-Nov-2023	M	UK	Royal Institution of Chartered Surveyors (RICS)	https://ww3.rics.org/uk/en/modus/natural-environment/land/darwin-initiative.html

Title	**Type** (e.g. journals)	**Detail** (authors, year)	**Gender of Lead Author**	**Nationality of Lead Author**	**Publishers** (name, city)	**Available from** (e.g., weblink or publisher if not available online)
Smallholder producer organizations and Indigenous Peoples' strategies to advance agrobiodiversity	Journal Ag4Dev	Macqueen, Duncan 2024	M	UK	Tropical Agriculture Association international	https://taa-international.org/publications/journals/
*Sisters are doing it for themselves in biodiverse Belize	Online News/ blog	Macqueen, Duncan 2024	M	UK	International Institute for Environment Development	https://www.iied.org/sisters-are-doing-it-for-themselves-biodiverse-belize