

Darwin Initiative Capability & Capacity Annual 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: 30th April 2024

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

Darwin Initiative Project Information

Project reference	DARCC028
Project title	Strengthening conservation capacity for endangered Cycad species
Country/ies	Nigeria
Lead Partner	Crescendo
Project partner(s)	WAECINIT
Darwin Initiative grant value	£81,183
Start/end dates of project	1/04/2023 – 30/09/2024
Reporting period (e.g. Apr 2023 – Mar 2024) and number (e.g. Annual Report 1, 2, 3)	1/04/2023 – 1/04/2024 Annual Report 1
Project Leader name	Frédéric de Lacoste
Project website/blog/social media	www.crescendo-africa.org
Report author(s) and date	Solange Valadier 10/04/2024

1. Project summary

Cycads are the most “primitive” group of living gymnosperms and thus are among the most ancient of all higher plants surviving until today. *Encephalartos barteri* ssp *allochrous* found in Plateau State are endangered with extinction due to habitat loss and unsustainable trade. This project will enhance the knowledge and skills of local communities to conserve *E. barteri* ssp *allochrous* populations in situ and establish capacity to conserve seeds in community nurseries in Pankshin area, contributing to a sustainable management strategy.

In-situ conservation:

The in-situ aspect of the project involves:

- Raising awareness of cycad collecting and trade and national legislation collaborating with CITES via an in-country workshop with members of the Nigerian Ministry of Environment and others NGOs and stakeholders involved in combating illegal wildlife trade in Nigeria.
- Enhancing the capability of local stakeholders on conducting community engagement for conservation through training and continued supervision.
- Build empowerment towards rural communities through participatory mapping.

- Engagement of a local MSc student to enhance knowledge of cycad habitat quality, distribution, and population size, thereby supporting biodiversity conservation;
- Sharing of project learning through a networking workshop, giving an opportunity for stakeholders to feedback proposed conservation strategies and discuss outcomes for local community. The results will also be reported to the CITES Authority in Nigeria.

Ex-situ conservation:

The ex-situ aspects of the project involves:

- Training provided by WAECINIT on specificities of seed collection of *E. barteri* ssp *allochrous*.
- Training and capacity building of the participating farmers on the basic tenets of quality seedling production under protected conditions and in improved nursery management technologies.
- Construction of the nurseries: fences, bore hole, seedling bed, greenhouse and protective roof.
- 2 Follow-up meetings to ensure that community-based nurseries have capacity to conserve and develop *E. barteri* ssp *allochrous* ex situ, able to disseminate learning to other communities.

2. Project stakeholders/ partners

All formal partners and key stakeholders are actively engaged with the project.

WAECINIT NGO members have been instrumental at developing the ongoing community engagement activities.

In-country partners have led on the choice of target community, based on their extensive knowledge of the current threats and challenges of the area.

The link with the CITES office was established and led to Crescendo's participation in their annual national forum on combating illegal wildlife trade. This gave us the opportunity to present our project, which was of great interest to the authorities, highlighting the urgent need for action on *Encephalartos*.

Technical staff have also given their time for training sessions.



Figure 1 -CITES Forum Abuja 6/10/2023

3. Project progress

3.1 Progress in carrying out project Activities.

Output 1: Enhanced capability to identify and protect *E. barteri* ssp allochrous in situ by local stakeholders within the Gilling and Putshit communities.

1.1 Challenges and perspectives in *E. barteri* ssp allochrous conservation training taking place in Gilling in July 2023.

A training course led by a WAECINIT team member was held in July 2023 in Gilling, attended by 15 participants (mostly women) from the Gilling communities. This exceeded the target number of participants within the original log-frame (10 people). A translation in Hausa was provided throughout the training to make the material accessible to all participants.



Figure 2- Signature Meeting Attendance

No	Name of the participant	M/F	Organization / Place	Position / Job	Signature
1	Gabriel Yisa	M	Gilling	Village Head	[Signature]
2	Nancy Menkat	F	Gilling	Women Elder	[Signature]
3	Martha Justice	F	Gilling	Women leader	[Signature]
4	Nantap Kwadwope	F	Gilling	Amfara Women leader	[Signature]
5	Appolis Charles	M	Gilling	Youth leader	[Signature]
6	Kullata Joseph	F	"	Villager	[Signature]
7	Mahaya Musa	F	"	"	[Signature]
8	Esther Jasper	F	"	"	[Signature]
9	Sahin Samlaylan	F	"	"	[Signature]
10	Janifer Nako	F	"	"	[Signature]
11	Relvia Onah	F	"	"	[Signature]
12	Nantap Philip	M	"	"	[Signature]
13	Joel Sumet	M	"	"	[Signature]
14	Alina V. King	F	"	"	[Signature]
15	Fabrice Nuhu	F	"	"	[Signature]

Figure 3 -Meeting Attendance

1.2 Recruitment and training of MSc student by WAECINIT on *E. barteri* ssp allochrous identification and habitat assessment.

WAECINIT have recruited an MSc student from the University of Jos. Sukat Dawang (figure 5 - 6) has spent the last year working closely with the team to familiarise herself with *Encephalartos barteri* ssp allochrous identification. She followed all the trainings and she has completed her literature review. During the last 4 months, she assessed the habitat, studied the taxonomy, the distribution and the population. She was in charge of semi-structured interviews and participatory mapping. She spends her time currently to compile all data.



Figure 4 - Sukat Dawang on the left

1.3 Best-practice on semi-structured interviews and community participatory mapping developed.

The first workshop was conducted in May 2023 by Crescendo PD to develop best-practice on community engagement. The progress made above have put the project team in a very good position to deliver activities under this output for the upcoming 6 months. Materials for the first engagement with the communities have been developed in Hausa.

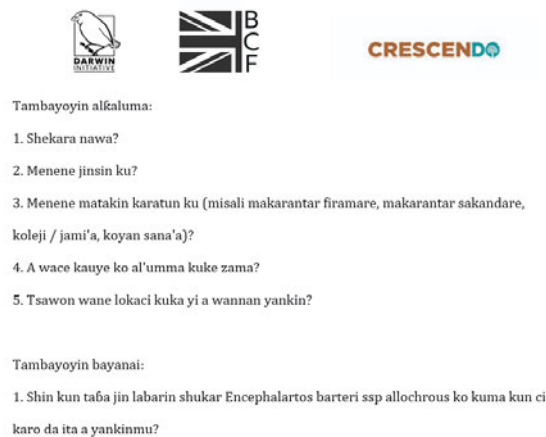


Figure 5 -Screenshot of Semi-structured interviews in Hausa

1.4 Project staff and MSc student engage with and conduct semi-structure interviews.

Crescendo team have conducted door-to-door interviews during the beginning of the dry season November to January: agricultural activities are low, and roads are accessible see, ensuring a maximum number of residents are free to take part. The semi-structured interviews with 200 community members (~60% women) was done to identify socio-economic background, current knowledge of in situ plant conservation, location of the remaining population of Encephalartos and ancestral knowledge on the threats.

This activity was previously planned to start by the end of September. However, we decide to delay the survey until the beginning of November. The rainy season was so strong in September that many communities were inaccessible as the roads turned into rivers, making surveying impossible.



Figure 6- Semi-structured interviews in Gilling

1.5 Participatory mapping exercise with community members

In November and December 2023 Crescendo conducted participatory mapping with the members of the village which gave the PI. Informations captured gave important data relating to landscape use, threats, location of the remaining *Encephalartos* population in the wild. This collaborative effort not only fostered engagement and trust within the village but also yielded invaluable insights into landscape utilization, prevalent threats, and crucially, the precise locations of the remaining *Encephalartos* population in the wild. By harnessing the knowledge and perspectives of residents, the participatory mapping exercise facilitated a nuanced understanding of the ecosystem dynamics and conservation challenges. The information gathered served as a cornerstone for the project, guiding subsequent research endeavors and conservation strategies aimed at safeguarding the endangered *Encephalartos* species and its habitat.



Figure 7 - Participatory mapping

1.6 MSc student conduct *E. barteri* ssp allochrous habitat Surveys

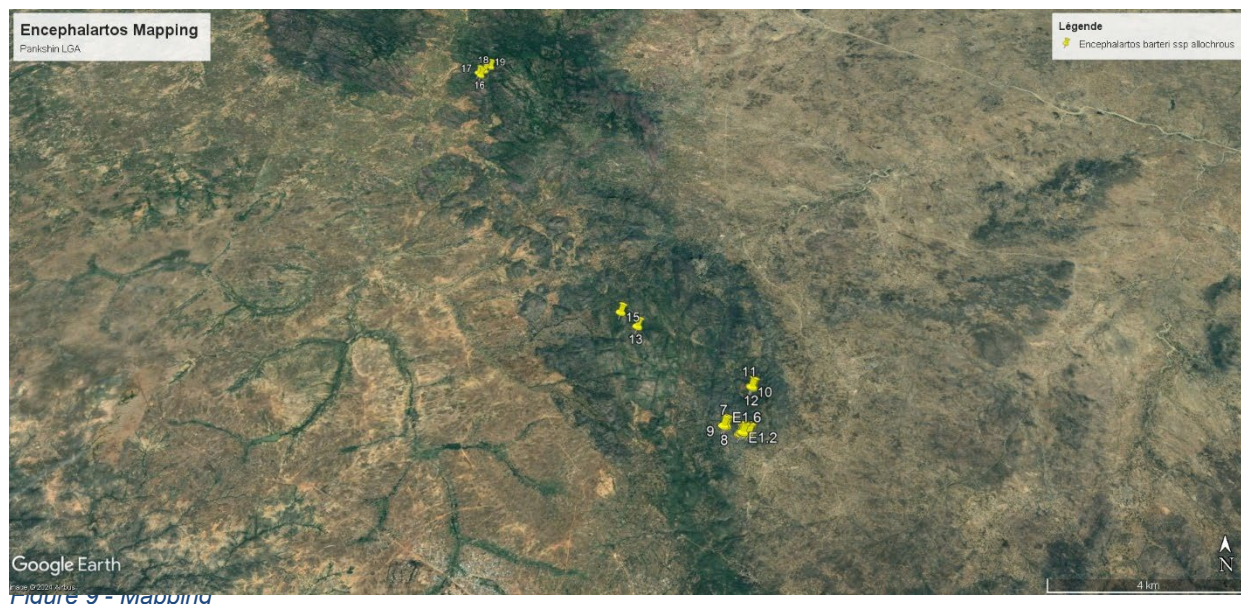


Figure 8 - Habitat surveys

The habitat surveys for *E. barteri* ssp allochrous involved meticulous sampling techniques aimed at comprehensively understanding the ecosystem. Utilizing 50mx50m plots subdivided into 10mx10m subplots ensured detailed data collection. Within each subplot, various parameters were recorded, including the abundance and sizes of cycad plants, along with identifying associated plant species and analysing soil composition through samples. Notably, the surveys extended beyond ecological aspects to assess anthropogenic impacts, such as the removal of plants for agricultural purposes. Documentation was comprehensive, with digital imagery capturing plant morphology for further analysis. Furthermore, engaging with local communities through interviews and questionnaires enriched the study with ethno botanical and historical insights specific to each village, offering a holistic perspective on the endemic *Encephalartos* plant within the region.

1.7 *E. barteri* ssp allochrous habitat and use map finalised for final networking meeting.

This comprehensive map not only delineated the distribution of the species but also provided valuable insights into the various ways in which the habitat is utilized by both the plant and human populations. Through meticulous data collection and analysis, critical information regarding habitat preferences, ecological niches, and human interactions with the environment was synthesized into a visually accessible format. The finalized map will serve as a powerful tool for stakeholders, enabling informed decision-making and strategic planning for conservation efforts. Its presentation at the networking meeting will underscore the collective commitment towards the preservation of *E. barteri* ssp allochrous.



Activities 1.8 and 1.9 related to Year 2.

Output 2

The activities within output 2 under the project implementation timetable relates to increasing the capability and capacity of local communities to conserve and develop *Encephalartos Barteri ssp Allochrous ex situ*. The following outlines progress towards the agreed activities:

2.1 Ten individuals training provided by WAECINIT on specificities of seed collection of *E. barteri ssp allochrous* and nursery management.

The training course led by WAECINIT took place during the 1st week of June. The training was well received by all the participants. (12 trainees: 8 women – 4 men). Trainees were shown how to collect *E.barteri ssp Allochrous* at the right stage of seed maturity, had training on the best techniques for cleaning seeds and learnt about different types of strategies for their conservation.



Figure 10 - Training seeds collection



Figure 11 - Training in Ibadan IITA

5 persons received a training in Nursery Management improvement techniques in IITA Ibadan. <https://www.iita.org/news-item/conservationists-learn-tree-management-and-propagation-practices-from-iita-forest-center/>

Spanning three days from November 14th to 16th, the workshop, facilitated by the IITA Capacity Development Office and Forest Center, aimed to equip participants with essential skills for conserving endangered species. Led by IITA Field Supervisor Olukunle Olasupo, the workshop covered a wide array of topics including nursery establishment, seed collection and processing, tree management, vegetative propagation, and garden management. Through practical field exercises, participants learned about the nuances of raising tree seedlings, breaking seed dormancy, and identifying suitable soil types for different tree species. They also gained insights into sustainable gardening practices and the identification of medicinal plants during a visit to the Forest Center's botanic nursery. The exchange of experiences between the Forest Center and Crescendo Africa highlighted common challenges in conservation efforts, including policy support, community engagement, and environmental threats.

2.2 Delivery of training on *E. barteri ssp allochrous ex situ* conservation by trained staff members.

In August 2023, field-based training sessions (one in Gilling and 1 in Putshit) on *E. barteri ssp allochrous ex situ* conservation were successfully delivered by trained staff members. The training focused on essential aspects such as checking ripeness, collecting methods, drying techniques, and conservation practices. Main collecting staff members were guided through hands-on demonstrations to ensure proficiency in these crucial tasks. Remarkably, the training surpassed expectations in terms of participation, with a total of 67 (40 in gilling,

27 in Putshit see figure 12) individuals attending, exceeding the anticipated turnout. Notably, over 60% of the participants were women, showcasing a commendable level of gender inclusivity in the conservation efforts. This robust engagement underscores the commitment and enthusiasm within the community towards the preservation of this endangered species, promising a brighter future for its ex-situ conservation endeavors.

GILUNG					
1 EMMANJEL LUMAS	MALE	09071615608	47 Pollicarp Gambo	F	08032227022
2 MARY YUWANA	FEMALE	07019277659	48 Jossiah Gofir	F	07031691842
3 KITA ISHAYA	MALE	07018113255	49 Ninrotmwa Tokdang	F	08121802174
4 JUMMAI SILAS	FEMALE	09025088184	50 Jiritmwa Silas	F	09169328571
5 MAIKO NBOH	MALE	09025404002	51 Celina Joel	F	07062572673
6 RUFKATU ISTIFANUS	FEMALE	09025828557	52 Talatu Gidion	F	08069216755
7 CECEUA NAPOLEON	FEMALE	09020304047	53 Rejoice Ritji	F	08148282824
8 JOEL N SHUWET	FEMALE	09072111076	54 Charity Lokrit	F	08144591492
9 ENOCH MADA	MALE	08082250548	55 Ladi Dakom	F	08068680615
10 SAMUEL WALEP	MALE	09123190430	56 Ritkatmwa Lokji	F	08140469062
11 PATRICIA NUHU	FEMALE	08029450612	57 Elizabeth Wakyor	F	08065492117
12 FELUSA DANIEL	FEMALE	08129184890	58 Daniyora Dora Pius	F	08167996447
13 STEVIN AMPANG	MALE	09125314813	59 Precious Joseph	F	07048326026
14 ISHAKU KUNI	MALE	07019294234	60 Pattence A. Jawgkat	F	08053362537
15 CELINA YILENG	FEMALE	09129283809	61 Plangnan Kilyobas	F	08071592744
16 PAUL SAMBO	MALE	07083943134	62 Daniel Polit	M	07067695134
17 ALFRED SHUWET	MALE	07018484829	63 Felix Ndom	M	08128726079
18 JIBRIN TONGS	FEMALE	09025404002	64 Andi Sunday	M	08066904928
19 KALU SAFAU	MALE	09040247115	65 Richard Sunday	M	08069593815
20 LADI MICHAEL	MALE	09074343289	66 Gobur K. Michael	M	08037570442
21 LYDIA PHILIMON	FEMALE	07068032273	67 Gobur Sunday	M	08109219332
22 DAMRY HAPPINESS	FEMALE	09067116616			
23 NENUWMAALICO	FEMALE	07041852183			
24 HANATU HABILA	FEMALE	0915943853			
25 KEZIAH JOSSY	FEMALE	08062547220			
26 MERCY ABSOLOM	FEMALE	07036171957			
27 NAOMI HOSEA	FEMALE	08131095656			
28 PHILIP GUZAN	MALE	09097120649			
29 ZAKKA DUWAR	MALE	08164372490			
30 NANDOM NOK	MALE	07036379208			
31 AROLOS CHARLES	MALE	08102637024			
32 FELICIA OBADIAH	FEMALE	08110175691			
33 MONIKASATI	FEMALE	07047403898			
34 MARTHA JUSTICE	FEMALE	09044701116			
35 SAGHOTMANG PLONGJI	MALE	08084321009			
36 DANJUMA PANMAK	MALE	08105559885			
37 ENDURANCE NANDOM	FEMALE	09095939352			
38 NAANCIN NATHAN	FEMALE	09167971868			
39 GABRIEL YILSE	MALE	07036936144			
40 NANRET PHILIP	FEMALE	07062484650			
PUTSHIT					
41 Kauna Mourice	F	08065745674			
42 Ruth Micah	F	08124123927			
43 Rotktmwa Ruben	F	08139088802			
44 Cicilia Alfriad	F	09133649118			
45 Francah Dakup	F	09064888248			
46 Abigel Phillimon	F	08168375969			

Figure 12 - Attendance Trainings

2.3 Setting up community-based nursery in Putshit and training staff nursery

A new nursery has opened in the village of Dighirkung in the Putshit area. Community land has been made available for the project. The land was fenced off, a solar well was installed, and the new nursery was born! The Crescendo Project Manager trained the new nursery staff in good management practices at the end of August.



Figure 13 - Nursery under construction

2.4 Locality survey of E. barteri ssp allochrous populations for seed collection activity

Surveys were conducted between June and August to locate populations of E. barteri ssp Allochrous for the seed collecting expeditions later in the year (Q3-Q4).

One of the challenges of collecting Encephalartos is that the female cone does not produce every year. This survey was therefore crucial for the subsequent collection. By identifying populations of E. barteri ssp Allochrous and assessing their fruiting status, researchers can better anticipate periods of female cone production and optimize seed collecting expeditions. This precise knowledge of the species' reproductive cycles helps minimize the risk of failure and ensures effective and sustainable seed collection, essential for the long-term preservation of this endangered species.



Figure 14 - Cone surveys

2.5 Seeds and data of E. barteri ssp allochrous collected from multiple areas.

Seeds and data of E. barteri ssp allochrous were collected from multiple areas through about ten expeditions dedicated to seed collection. The terrain posed significant challenges, with rugged paths cutting through highly rocky zones. Despite these obstacles, a group of determined individuals, predominantly youth, ventured into the highest reaches of the mountains for collection purposes. Approximately 500 seeds were harvested from 10 different locations, representing a diverse array of habitats within the species' range. This extensive collection effort secured genetic diversity and contributing to the conservation of E. barteri ssp allochrous.



Figure 15 - Seeds collection Fier area

2.6 Seeds are cleaned, dried and pre-storage viability determined.

The cleaning of *Encephalartos* seeds is exceptionally tedious due to their intricate structure. However, this meticulous task was undertaken with great enthusiasm by the women (figure 16) who received training in seed processing. Despite the challenges, they approached the work with dedication. Additionally, the drying process (figure 17) was carried out using traditional methods, preserving the seeds in a manner that has been passed down through generations. This blend of traditional knowledge and modern conservation practices highlights the collaborative and adaptive approach taken towards safeguarding the future of *Encephalartos* species.



Figure 17 - Seeds are dried



Figure 16 - Seeds are cleaned

Activities 2.7 to 2.10 related to Year 2.

3.2 Progress towards project Outputs

Output 1 Enhanced capability to identify and protect *E. barteri* ssp *allochrous* in situ by local stakeholders within the Giling and Putshit communities.

Baseline: Minimal capacity for sustainable *Encephalartos* conservation action within these communities.

Change to date: In year 1, the project organised a training course on the challenges of conservation of *Encephalartos*. At the end of the course, they were pleased with the usefulness of the information provided and the confidence they had gained in approaching the project. We will be conducting a survey in the second year to gauge the level of understanding and confidence.

An MSc student has been recruited for the project and she is progressing well in her training and data collection. A successful submission will improve our understanding of *Encephalartos* and increase the country's capacity for plant conservation.

Semi-structured interviews with nearly 200 community members in Giling and Putshit identified the socio-economic context, current knowledge of in situ plant conservation, perceived benefits of cycas protection and use of cycas. This information was essential for anchoring our project in the reality of these communities. The subsequent participatory mapping of *Encephalartos* threats and habitats enabled us to create the first map of its kind for this species: 20 households trained for this activity carried it out.

All the information obtained will be compiled and distributed in a guide to 100 households and local stakeholders by July.

Crescendo and its partners will present the results of the project to local communities and land managers at a networking workshop by September 2024.

Output 2 Community-based nurseries have capacity to conserve and develop *E. barteri* ssp allochrous ex situ, able to disseminate learning to other communities.

Baseline: No current capacity to conserve seeds of *Encephalartos barteri* ssp allochrous nor develop population ex-situ in Nigeria.

Change to date: The project is making good progress towards meeting Output 2. At the start of the project, no viable seeds of *Encephalartos* had ever been conserved and developed in situ. Storage experiments with *Encephalartos* seeds collected in Year 1 will have all viability tested after 6-months and will be analysed to identify the most suitable storage conditions for future collections. We will repeat viability assessment in Year 2 to identify if there were any significant declines seen within a year of storage.

Training conducted in IITA have ensured that leaders of 2 nurseries have the same knowledge and competences to manage the nurseries and work of conservation ex-situ of *Encephalartos*. The course was a great success and covered all the following points: In situ conservation of trees, Nursery maintenance and gardening, Creation and management of endangered species nurseries, Extraction, cleaning and sowing of seeds, Vegetative propagation of threatened tree species, Tree planting and maintenance, Ex situ conservation techniques.

The nurseries are now well settled up. Seedlings production is currently ongoing, and all data will be collected by August. We will organise 2 follow-up meetings with individual participants to discuss the implementation of the training, the organisation of the nursery and to evaluate the impacts of the training from the end of August.

3.3 Progress towards the project Outcome

Outcome: Increase in capability and capacity of local communities stakeholders to identify and conserve *E. barteri* ssp allochrous in situ and ex situ.

Indicator 1: By March 2024, 40 individuals have an increased understanding on challenges and solutions for *E. barteri* ssp allochrous conservation. Baseline: 0 individuals have insights over conservation solutions for *E. barteri* ssp allochrous. To date, 67 have received training in the challenges and solutions for *Encephalartos* conservation. In Year 2 we will re-engage with the individuals to measure level of understanding at project end.

Indicator 2: By December 2023, 20 households will have contributed to identifying key areas for conservation and *E. barteri* ssp allochrous collection/use, imparting this knowledge to local NGOs, stakeholders and 100 households within the Giling and Putshit communities by September 2024. Baseline: 0 households contribute towards identifying key conservation areas. To date, 20 households have contributed towards identification of key areas. The final networking meeting and activities to spread the information to the extend communities is scheduled from August to September.

Indicator 3: By March 2024, a population of *E. barteri* ssp allochrous is conserved ex situ. Baseline: 0 population of *Encephalartos* seeds conserved ex situ. To date, 500 seeds from last remaining populations in the wild are conserved within the 2 nurseries. Year 2 will target seedlings production.

Indicator 4: By July 2024, a guide on key cycad habitats and their threats are made available to all relevant stakeholders. Baseline: No comprehensive study on *Encephalartos* habitat and threats distributed to relevant stakeholders. No change as this activity is planned in July.

Indicator 5: By August 2024, a working protocol for safe breaking seed dormancy and the seedling monitoring leading to their long-term conservation is adopted by staff members of the nurseries. Baseline: No working protocol for safe duplication is pre-existent. Preliminary data on response of seeds to different drying, storage and breaking dormancy is being gathered.

3.4 Monitoring of assumptions

Assumption 1: Community members and stakeholders are willing to take part in project activities and share information with project staff.

Comments: Assumption still holds true. Participation with local communities and other stakeholders will be essential to ensure the project Outcome is met. Currently, we have received favourable engagement with community members.

Assumption 2: Training is effective in building communities capacity and knowledge of conservation E. barteri ssp allochrous.

Comments: Assumption still holds true. The commitment shown during the training sessions was total and the follow-up meetings planned for October will enable the effectiveness of the training to be verified.

Assumption 3: Suitable MSc student candidate can start by the proposed time.

Comments: Suitable MSc student candidate has been recruited and have started with project activities on time. (see Section 3.1)

Assumption 4: Sufficient number of mature seeds available for collection.

Comments: More than 500 mature seeds were available for collection (see Section 3.1).

Assumption 5: Community-based nurseries are willing to well function and organise, following training and provision of materials.

Comments: Assumption still holds true. Community-based nurseries are settled and aims to be used for the coming weeks.

Assumption 6: Community-based nurseries staff agree to accept working protocol.

Comments: Assumption still holds true. We are in the process of developing the protocol.

3.5 Achievement of positive impact on biodiversity and poverty reduction

Training, nurseries procurement and funding will allow *E. barteri* ssp allochrous conserved in-country.

Key ecosystems services will be highlighted to stakeholders that utilise the local landscape and information on threats and *E. barteri* ssp allochrous populations will contribute towards the development of an action plan for the conservation of biodiversity.

Project staff gain knowledge and skills in community engagement practices, benefiting 20 households through participatory mapping exercises and 1000 households aware of the links between biodiversity conservation in their community.

10 individuals have acquired skills in collecting seeds of *Encephalartos Barteri* ssp Allochrous with WAECINIT (figure 10) and 5 in nursery gestion in IITA training (figure 11).

The training on ex situ conservation by trained staff members was a real success with 67 attendees (see Attendance Register figure 12) with more than 60% women being present, contributing towards gender equality.

The project has exceeded this target with relation to available training.

Follow-up meetings are scheduled in October to evaluate the impacts of the trainings.

Procurement will improve facilities and conservation outcomes, thereby attracting additional funds related to biodiversity conservation and scientific research grants in-country. A significant change in the first year was the procurement and successful delivery of a new nursery (figure 13). This will allow the communities to develop projects for long-term conservation and will contribute to a sustainable management strategy.

One local student will gain Masters degree during the project, contributing towards increasing potential employment in the long-term. Progress towards this is going well, with recruitment of an MSc student (figure 4).

4. Project support to the Conventions, Treaties or Agreements

Nigeria has been a signatory of the CBD since 1992 and a party since 1994. Progress towards contribution of the following strategic goals A-E are as follows:

Aichi Targets (AT) 1, 4, 5 and 7 by identifying key stakeholders in important biodiversity areas and raising awareness of biodiversity and threats to *Encephalartos* diversity. Participatory mapping and learning from the project will disseminate key strategies that can ensure landscape conservation while improving rural livelihoods. Progress to date: baseline surveys on the level of understanding have enabled us to identify key stakeholders within communities, conservation training has raised community awareness and participatory mapping carried out in the third quarter with the same communities is increasing the level of conservation.

AT 12: Through ex situ conservation activities, the project will contribute towards halting the extinction of threatened species. Progress to date: The community-based nursery is setting up, seeds collection activity was finished by March 2024 and seeds are currently under breaking-dormancy in the nursery.

AT 18: open consultative process with the local communities will ensure the project outputs respect the knowledge and practices of local communities. Progress to date: Engagement with target communities has begun and further engagement is planned at the end of June and September.

CITES: *E. barteri* ssp allochrous are covered under Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora CITES (<http://www.cites.org>).

The project will enhance understanding of CITES within Nigeria, with links made between protect teams and key projects stakeholders. Progress to date: CITES forum in Abuja 6/10/2023.

5. Gender Equality and Social Inclusion (GESI)

Please quantify the proportion of women on the Project Board ¹ .	100%
Please quantify the proportion of project partners that are led by women, or which have a senior leadership team consisting of at least 50% women ² .	100%

GESI Scale	Description	Put X where you think your project is on the scale
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	

The development of questionnaires for community engagement takes into account gender, to measure the level of understanding and confidence towards decision-making process within the project. Semi-structure interviews were conducted by women. Training events so far have shown a higher proportion of women attending, increasing the skills and knowledge for women within the workplace.

6. Monitoring and evaluation

The Outputs and Activities within the project have been designed to contribute towards the project's Outcome.

In the first year, this is most evident in the successful collection and nursery management post-training thereby contributing towards the capability of local communities able to conserve E. barteri ssp allochrous ex situ.

We employ both qualitative (e.g. responses of Training Assessments and workshop surveys) and quantitative (e.g. number of seed collections and number of people trained) indicators of success to measure on-going progress towards project Outputs. An implementation timetable

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.

² Partners that have formal governance role in the project, and a formal relationship with the project that may involve staff costs and/or budget management responsibilities.

has been developed together with project partners and reviewed monthly. WAECINIT staff members have overall responsibility of capturing appropriate data sources in-field, while Crescendo is responsible for analysing and reviewing progress. Information is shared through email exchanges and online partner meetings. Crescendo has an internal project monitoring process to identify shortfalls in both activities and finances. There are no changes to the M&E plans.

7. Lessons learnt.

Over the past year, the main lessons and recommendations for future similar projects are below:

Challenges due to financial market fluctuations: Fluctuations in the financial market impacting the GBP-Nairas exchange rates has been a significant challenge in our project. When the project budget was agreed, the exchange rates were stable, however, due to on-going financial crisis after the presidential election the amount received by partners were significantly less than expected. We now need to monitor exchange rates closely to ensure disbursement is done during favourable times for key activities. Future projects should incorporate adequate contingency within their budget to account for significant fluctuations in exchange rates and gather this information during turbulent periods of time.

Challenges linked to travel in the communities: the rainy season from July to September was particularly violent and forced us to postpone interviews and other activities because the communities were inaccessible due to the rains and the lack of roads. If we had to do it again, we would reorganise our timeframe to avoid activities in the most isolated villages during the rainy season.

Importance of pre-project data gathering: Considering the limited seasons for seed collecting within this project (November 2023 to March 2024), the digitised data became significantly instrumental to the success of the collecting aspect of the project. Without this data, the collecting team remarked that they would not have been able to locate many of the populations at the correct seed ripening time. Similar future projects will need to have access to detailed locality data of their intended species and/or populations if the objective of said project is to have collections as an objective. Alternatively, capability projects could include objectives relating to digitising ground truthing activities, as this would greatly enhance the capability of nations to conserve their biodiversity.

8. Actions taken in response to previous reviews (if applicable)

N/A

9. Risk Management

There have been no new risks to add to Risk Register that were not previously accounted for either at the start of the project or reported at the Half Year report. The Risk Register has been updated.

10. Sustainability and legacy

The project's staff remain motivated to continue the project.

Crescendo's participation in the national CITES workshop was an opportunity to present our project at federal level.

Capacity building through the project is set to continue thanks to Plateau State's commitment to biodiversity conservation.

The capacity built through this project will increase funder confidence and gain a stronger position for successful applications. The sustained legacy will be through the ex-situ conservation of a unique collection of *Encephalartos* in Nigeria.

We intend to broaden our impact and secure the legacy of the project by disseminating the lessons learned from the project through the Jos Botanical University newsletter.

11. Darwin Initiative identity

The Darwin logo is being used in every documentation produced for the project. Posts on Instagram are done through @crescendo.africa account with link to @biodiversitychallengefunds #darwininitiative.

12. Safeguarding

Has your Safeguarding Policy been updated in the past 12 months?	No
Have any concerns been reported in the past 12 months	No
Does your project have a Safeguarding focal point?	Yes. Nantap Longkop Mathias. [REDACTED]
Has the focal point attended any formal training in the last 12 months?	No, latest safeguarding training was completed on 12/2022
What proportion (and number) of project staff have received formal training on Safeguarding?	Past: 22% [2] Planned: 44% [4]
Has there been any lessons learnt or challenges on Safeguarding in the past 12 months? Please ensure no sensitive data is included within responses.	
None to report for now.	
Please describe any community sensitisation that has taken place over the past 12 months; include topics covered and number of participants.	
Presentation on the Safeguarding Policy has been led prior to the participatory mapping. 20 people in Gilling, 23 in Pushit reflecting a collective dedication to creating safe and inclusive environments for all. Subject underlined: <u>exploitation, abuse, bullying and harassment.</u>	
Have there been any concerns around Health, Safety and Security of your project over the past year? If yes, please outline how this was resolved.	
None to report for now.	

13. Project expenditure

Table 1: Project expenditure during the reporting period (1 April 2023 – 31 March 2024)

Project spend (indicative) since last Annual Report	2023/24 Grant (£)	2023/24 Total Darwin Initiative Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)				
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items (see below)				
Others (see below)				
TOTAL	70 157,0	70 157,00	0	

Project mobilised or matched funding during the reporting period (1 April 2023 – 31 March 2024)

	Secured to date	Expected by end of project	Sources
Matched funding leveraged by the partners to deliver the project (£)			Private companies and donation.
Total additional finance mobilised for new activities occurring outside of the project, building on evidence, best practices and the project (£)			

14. Other comments on progress not covered elsewhere

Not applicable.

15. OPTIONAL: Outstanding achievements or progress of your project so far (300-400 words maximum). This section may be used for publicity purposes.

Annex 1: Report of progress and achievements against Indicators of Success for Financial Year 2023-2024

Project summary	Progress and Achievements April 2023 - March 2024	Actions required/planned for next period
Outcome Increase in capability and capacity of local communities stakeholders to identify and conserve E. barteri ssp allochrous in situ and ex situ.		
Outcome indicator 0.1 By March 2024, 40 individuals have an increased understanding on challenges and solutions for E. barteri ssp allochrous conservation	Completed. Attendance register can be found in section 3.1 of this report.	
Outcome indicator 0.2 By December 2023, 20 households will have contributed to identifying key areas for conservation and E. barteri ssp allochrous collection/use, imparting this knowledge to local NGOs, stakeholders and 100 households within the Giling and Putshit communities by September 2024	In-progress, partially completed. Keys areas for conservation, collection are identified. Knowledge transfer activities are still ongoing.	Assessment of the transmission of knowledge is scheduled end of August.
Outcome indicator 0.3 By March 2024, a population of E. barteri ssp allochrous is conserved ex situ.	In progress. Seeds have been collected, dried and pre-storage viability determined.	Seeds dormancy breaking germination and production monitoring.
Outcome indicator 0.4 By July 2024, a guide on key cycad habitats and their threats are made available to all relevant stakeholders	In progress. Data collection done and assessed.	Information to be gathered in the guidebook.
Outcome indicator 0.5 By August 2024, a working protocol for safe breaking seed dormancy and the seedling monitoring leading to their long-term conservation is adopted by staff members of the nurseries	In progress.	Assessment of the working protocol is scheduled mid-September.
Output 1		
Enhanced capability to identify and protect E. barteri ssp allochrous in situ by local stakeholders within the Giling and Putshit communities.		
1.1 10 individuals (>60% women) trained on challenges in cycad conservation by July 2023.	Completed. Photos can be found in section 3.1 of this report.	
1.2 MSc student in place by July 2023, and capable of conducting cycad identification and habitat surveys by February 2024.	In progress. MSc student recruited and currently analysing data gathered.	Analysis gather data for her thesis.
1.3 Semi-structured interviews with 200 community members (Giling and Putshit) to identify socio-economic background, current knowledge of in situ plant conservation, perceived benefit	In progress. Semi-structured interviews delayed to nov.23 due to the bad access to the community with the rains.	Analysis of the survey is ongoing.

from cycad protection and cycad use completed by September 2023 and analysed by December 2023.		
1.4 Key <i>E. barteri</i> ssp allochrous populations and current threats (including land and use) gathered through community participatory mapping with 20 households identified by December 2023.	Completed	
1.5 Resources and information on <i>E. barteri</i> ssp allochrous identification, botanical guides and conservation action developed and distributed to -100 households, local stakeholders.	Planning stage.	Information has been gathered. Work on the layout and organisation of the guide will start at the beginning of May.
1.6 Crescendo and partner present project findings to local communities, local land managers in a networking workshop by September 2024	Not started	Workshop planned for September 2024.
Output 2.		
Community-based nurseries have capacity to conserve and develop <i>E. barteri</i> ssp allochrous ex situ, able to disseminate learning to other communities.		
2.1 By June 2023 training provided by WAECINIT on specificities of seed collection of <i>E. barteri</i> ssp allochrous and nursery management.	Completed. Photos and attendance register can be found in section 3.1 of this report.	
2.2 Field training of 10 key stakeholders will be carried out in collaboration with specialists from WAECINIT and Montane Forest Research Station.	Completed. Attendance register can be found in section 3.1 of this report.	
2.3 Trained staff members imparting learned knowledge and skill in seed collection to another 10 individuals (60% women) by October 2023.	Completed. Photos can be found in section 3.1 of this report.	
2.4 By September 2023 construction of Putshit's Community-based nursery.	Completed. Photos can be found in section 3.1 of this report.	
2.5 Seeds, herbarium and associated data collected by Mars 2024.	In -progress.	Data collected. To be gathered and analysed by the end of May.
2.6 By August 2024 seedlings production in each nursery.	In-progress.	Breaking dormancy is ongoing. Seedlings production started.
2.7 By October 2024 organisation of at least two follow-up meetings with individual participants to discuss the implementation of the training, the organisation of the nursery and to evaluate the impacts of the training.	Not started.	2 follow-up meetings are scheduled in October. With Giling Community the other one with Pushit Community.

Annex 2: Project’s full current Indicators of Success as presented in the application form (unless changes have been agreed)

Project summary	SMART Indicators	Means of verification
<p>Outcome: Increase in capability and capacity of local communities stakeholders to identify and conserve E. barteri ssp allochrous in situ and ex situ.</p>	<p>By March 2024, 40 individuals have an increased understanding on challenges and solutions for E. barteri ssp allochrous conservation</p> <p>By December 2023, 20 households will have contributed to identifying key areas for conservation and E. barteri ssp allochrous collection/use, imparting this knowledge to local NGOs, stakeholders and 100 households within the Giling and Putshit communities by September 2024.</p> <p>By March 2024, a population of E. barteri ssp allochrous is conserved ex situ.</p> <p>By July 2024, a guide on key cycad habitats and their threats are made available to all relevant stakeholders</p> <p>By August 2024, a working protocol for safe breaking seed dormancy and the seedling monitoring leading to their long-term conservation is adopted by staff members of the nurseries.</p>	<p>Attendance register and Training assessment forms Attendance register, final map, distribution letter and photos Data transfer forms Collection transfer form, viability assessment form and draft protocol</p>
<p>Output 1 Enhanced capability to identify and protect E. barteri ssp allochrous in situ by local stakeholders within the Giling and Putshit communities.</p>	<p>1.1 10 individuals (>60% women) trained on challenges in cycad conservation by July 2023.</p> <p>1.2 MSc student in place by July 2023, and capable of conducting cycad identification and habitat surveys by February 2024.</p> <p>1.3 Semi-structured interviews with 200 community members (Giling and Putshit) to identify socio-economic background, current knowledge of in situ plant conservation, perceived benefit from cycad protection and cycad use completed by September 2023 and analysed by December 2023.</p> <p>1.4 Key E. barteri ssp allochrous populations and current threats (including land and use) gathered</p>	<p>1.1 Attendance register, Training Assessment</p> <p>1.2 Employment record, Data from field surveys</p> <p>1.3 Interview register and data</p> <p>1.4 Attendance register, scan of map</p> <p>1.5 PDF copy of guide, distribution declaration</p> <p>1.6 Attendance register, copy of presentation; minutes of meeting</p>

	<p>through community participatory mapping with 20 households identified by December 2023.</p> <p>1.5 Resources and information on E. barteri ssp allochrous identification, botanical guides and conservation action developed and distributed to - 100 households, local stakeholders.</p> <p>1.6 Crescendo and partner present project findings to local communities, local land managers in a networking workshop by September 2024</p>	
<p>Output 2</p> <p>Community-based nurseries have capacity to conserve and develop E. barteri ssp allochrous ex situ, able to disseminate learning to other communities.</p>	<p>2.1 By June 2023 training provided by WAECINIT on specificities of seed collection of E. barteri ssp allochrous and nursery management.</p> <p>2.2 Field training of 10 key stakeholders will be carried out in collaboration with specialists from WAECINIT and Montane Forest Research Station.</p> <p>2.3 Trained staff members imparting learned knowledge and skill in seed collection to another 10 individuals (60% women) by October 2023.</p> <p>2.4 By September 2023 construction of Putshit's Community-based nursery.</p> <p>2.5 Seeds, herbarium and associated data collected by Mars 2024.</p> <p>2.6 By August 2024 seedlings production in each nursery.</p> <p>2.7 By October 2024 organisation of at least two follow-up meetings with individual participants to discuss the implementation of the training, the organisation of the nursery and to evaluate the impacts of the training.</p>	<p>2.1 Attendance register, training assessments</p> <p>2.2 Attendance register, training assessments</p> <p>2.3 Attendance register</p> <p>2.4 Procurement receipts for nursery setup</p> <p>2.5 Field data and monitoring</p> <p>2.6 Process viability assessment sheet, monitoring report</p> <p>2.7 Evaluation forms</p>
<p>Activities (each activity is numbered according to the output that it will contribute towards, for example 1.1, 1.2 and 1.3 are contributing to Output 1)</p> <p>1.1 Challenges and perspectives in E. barteri ssp allochrous conservation training taking place in Giling and in Putshit</p> <p>1.2 Recruitment and training of MSc student by partner institution on E. barteri ssp allochrous identification and habitat assessment</p> <p>1.3 Best-practice on semi-structured interviews and community participatory mapping developed</p> <p>1.4 Project staff and MSc student engage with and conduct semi-structure interviews</p>		

- 1.5 Participatory mapping exercise with community members
- 1.6 MSc student conduct E. barteri ssp allochrous and habitat surveys
- 1.7 E. barteri ssp allochrous habitat and use map finalised for final networking meeting
- 1.8 E. barteri ssp allochrous guidebook developed and 100 copies printed for distribution
- 1.9 Networking meeting delivered to key stakeholders within the area (community members and local land managers) for networking meeting
- 2.1 Ten individuals training provided by WAECINIT on specificities of seed collection of E. barteri ssp allochrous and nursery management
- 2.2 Delivery of training on E. barteri ssp allochrous ex situ conservation by trained staff members
- 2.3 Setting up community-based nursery in Putshit and training staff nursery
- 2.4 Locality survey of E. barteri ssp allochrous populations for seed collection activity
- 2.5 Seeds, herbarium, and data of E. barteri ssp allochrous collected from multiple areas
- 2.6 Seeds are cleaned, dried and pre-storage viability determined
- 2.7 Seeds dormancy-breaking germination and production
- 2.8 Seeds germination monitoring
- 2.9 Seedlings production monitoring and collecting data
- 2.10 Follow-up meetings with individual participants to discuss the implementation of the training, the organisation of the nursery and to evaluate the impacts of the training

Important Assumptions

- Community members and stakeholders are willing to take part in project activities and share information with project staff
- Training is effective in building communities capacity and knowledge of conservation E. barteri ssp allochrous
- Suitable MSc student candidate can start by the proposed time
- Sufficient number of mature seeds available for collection
- Community-based nurseries are willing to well function and organise, following training and provision of materials
- Community-based nurseries staff agree to accept working protocol

Annex 3: Standard Indicators

Table 1 Project Standard Indicators

DI Indicator number	Name of indicator	Units	Disaggregation	Year 1 Total	Year 2 Total	Year 3 Total	Total to date	Total planned during the project
DI-A01	Number of people from key local stakeholders completing relevant training on challenges in cycad conservation	People	Men	3			3	3
DI-A01	Number of people from key local stakeholders completing relevant training on challenges in cycad conservation	People	Women	12			12	12
DI-A01	Number of people from key local stakeholders completing relevant training on cycad seeds collection and nursery management	People	Men	3			3	3
DI-A01	Number of people from key local stakeholders completing relevant training on cycad seeds collection and nursery management	People	Women	7			7	7
DI-A03	Number of local organisation with improved facilities and staff knowledge for seedlings production	Organisation	NGO	1			1	1
DI-A04	Number of people reporting that they are applying new capabilities 6 months after training	People	Men		50		0	50
DI-A04	Number of people reporting that they are applying new capabilities 6 months after training	People	Women		50		0	50
DI-A05	Number of trainers trained reporting to have delivered further training to other members of staff on seed collection	People	Women		10		10	10
DI-C04	New assessments of biodiversity resource use for the Giling and Pushit communities published	Number	Participatory mapping Semi structure interviews	2			2	2

Table 2 Publications

Title	Type (e.g. journals, best practice manual, blog post, online videos, podcasts, CDs)	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)

Annex 4: Onwards – supplementary material (optional but encouraged as evidence of project achievement)

Checklist for submission

	Check
Different reporting templates have different questions, and it is important you use the correct one. Have you checked you have used the correct template (checking fund, type of report (i.e. Annual or Final), and year) and deleted the blue guidance text before submission?	x
Is the report less than 10MB? If so, please email to BCF-Reports@niras.com putting the project number in the Subject line.	
Is your report more than 10MB? If so, please discuss with BCF-Reports@niras.com about the best way to deliver the report, putting the project number in the Subject line.	x
Have you included means of verification? You should not submit every project document, but the main outputs and a selection of the others would strengthen the report.	x
If you are submitting photos for publicity purposes, do these meet the outlined requirements (see section 15)?	
Have you involved your partners in preparation of the report and named the main contributors	x
Have you completed the Project Expenditure table fully?	x
Do not include claim forms or other communications with this report.	