Darwin Initiative Main Project Annual Report

Important note: *To be completed with reference to the Reporting Guidance Notes for Project Leaders: it is expected that this report will be about 10 pages in length, excluding annexes*

Submission Deadline: 30 April

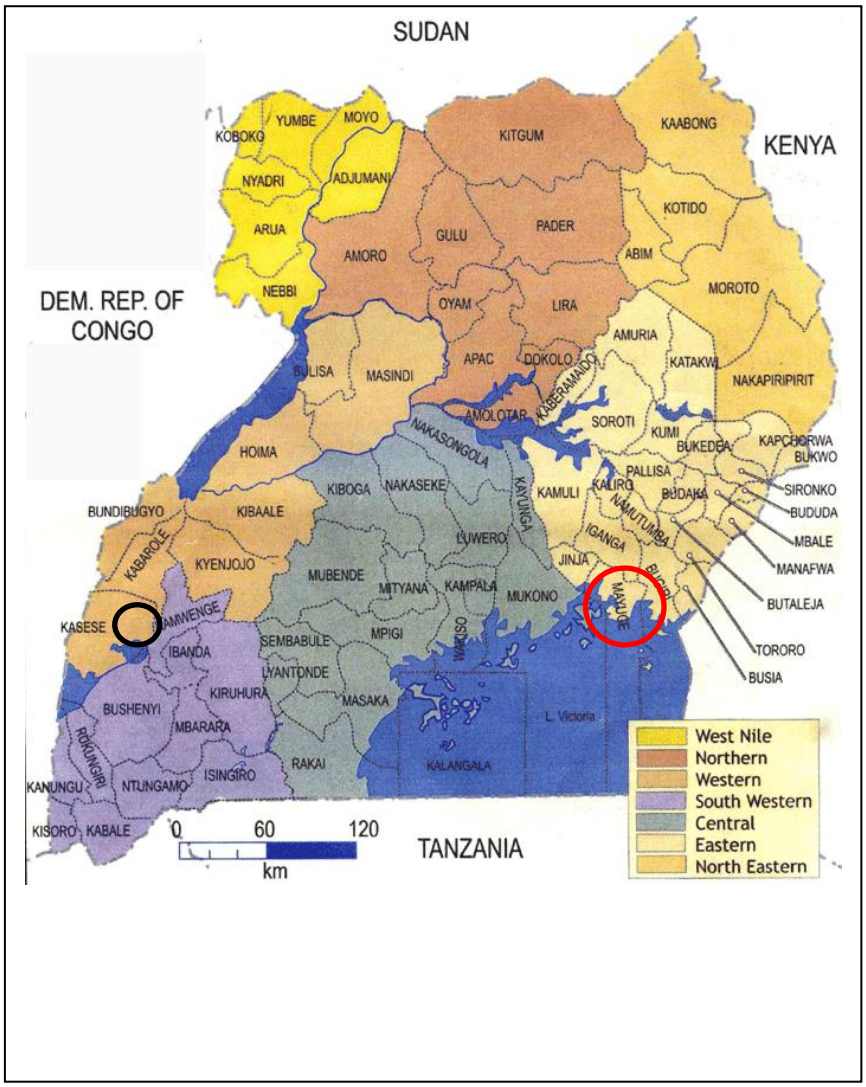
Darwin Project Information

Project Reference	21-003
Project Title	Protecting Ugandan endemic cycads from biodiversity loss and trafficking
Host Country/ies	Uganda, RSA, Thailand, China, Philippines
Contract Holder Institution	Royal Botanic Gardens, Kew, UK
Partner institutions	JERA (Uganda), SANBI (RSA), Nong Nooch Tropical Botanical Garden (Thailand), Fairylake BG (China), De La Salle Univ. (Philippines).
Darwin Grant Value	£192,676
Funder (DFID/Defra)	Defra
Start/end dates of project	1 April 2014 / 31 March 2017
Reporting period (e.g., Apr 2015 – Mar 2016) and number (e.g., Annual Report 1, 2, 3)	Annual Report 1 1 April 2014 - 31 March 2015
Project Leader name	Prof Hugh W. Pritchard
Project website/blog/Twitter	
Report author(s) and date	Hugh W. Pritchard, Jayanthi Nadarajan, Dennis Kamoga,

1. Project Rationale

Cycads are the most threatened family of higher plants (40% species) in the world as a result of illegal trade in wild-collected material (>$100 k global trade in *Encephalartos* sp. seed in 1983-99), over-exploitation locally, habitat degradation and climate change impacts on these dioecious species (for which the risk of pollinator or male / female cone production asynchrony is greatest). Threats to the three Ugandan endemic cycads are particularly high due to lack of national specialist capacity in conservation skills. Safeguarding cycads requires integration of sustainable management with conservation, wild cycad protection, local use and preventing illegal trade. Biodiversity and autecology data (seed/pollen biology yield, growth requirements, pollination) are essential to design evidence-based conservation programmes, including the production of non-detriment findings. The IUCN CSG 'Status Survey and Conservation Action Plan – 2004[1] stresses the urgent need for an integration of in situ and ex situ conservation approaches and for country capacity building and knowledge transfers between regions. A sustainable conservation solution will not be achieved without the involvement of local communities; specifically through better participatory planning, knowledge management and capacity building (Strategic Goal E of the Aichi Biodiversity Targets).

The majority of cycad studies in this project will be in the Maguye and Kamwenge Districts of Uganda. These localities are far apart and it seems likely that there will not be an equal level of fieldwork due to the remoteness of the Kamwenge District compared to Maguye District.



Maguye District

Kamwenge District

2. Project Partnerships

Demand and project planning:

The IUCN CSG 'Status Survey and Conservation Action Plan (2004) stresses the urgent need for an integration of in situ and ex situ conservation approaches and for country capacity building and knowledge transfers between regions. A sustainable conservation solution will not be achieved without the involvement of local communities; specifically through better participatory planning, knowledge management and capacity building (Strategic Goal E of the Aichi Biodiversity Targets). No greater demand for action is known than in Uganda, where the threats to three endemic cycads are exceptionally high due to lack of national specialist capacity in conservation skills. In the region SANBI (South Africa) is the lead organisation promoting the conservation of cycads, with its cycad work led by Dr John Donaldson, who is an internationally recognised expert. SANBI recommended to Kew engagement with JERA (Uganda) because of their mission to build capacity of local communities for sustainable utilization of plant resources. JERA also has experience of liaising with the national CBD authority (NEMA) and National CITES authority regarding permission for field work. Through discussion with many members of the IUCN Cycad Specialist Group, two gardens with large cycad collections (Nongnooch, Thailand and Fairylake, China) offered to help build capacity by

in Uganda by hosting scientists for training. The final partner in the project, De La Salle University (Philippines), has ambitions to develop a botanic garden, including cycads, for educational purposes. The main contact there, Mirabel Agoo, is already an active researcher on cycad biology. Finally, WCMC were approached to contribute to the work programme by providing specialist knowledge on trade in endangered species.

Particular achievements lessons, strengths or challenges and responses

JERA (Uganda) – The relationship with JERA is new and has taken time to get off the ground, partly due to delays in signing the MoU (bureaucracy) and the transfer of monies (Kew governance). JERA were excellent hosts for the Kew team's visit in July 2014. However, communications have been a little difficult, with email responses to requests for information not readily forthcoming. Therefore, it is proposed that Pritchard should visit Uganda in 2015-16, rather than attend the international cycad meeting in Colombia (July 2015), for which there is budget.

SANBI (South Africa) – Kew's relationship with SANBI on biodiversity research and conservation is longstanding, and communications have been excellent through research assistant uPhakamani Xaba (and John Donaldson), who is directly involved in the project. Both hosted the Kew team during July 2014 and Xaba then joined the team in Uganda. Dennis Kamoga and uPhakamani Xaba got on well and advice from SANBI to JERA has been provided on numerous occasions, particularly on methodologies for pollination.

Nongnooch (Thailand) – There was wholehearted support by Nongnooch for the training of two Ugandan scientists in November 2014; slightly delayed due to visa issues. Anders Lindstrom also hosted the Kew team in September 2014. Nongnooch is a strong supporter of this project even though their identified role is small.

Fairylake (China) – Communications have not been easy, possibly because the role for this institute in the project is relatively small. The Kew team did visit in September 2014 after the stay to Nongnooch. As planned, the Ugandan scientists tried to secure visas for entry into China. However, they were unsuccessful and it is not clear whether the a visit might happen at a later time. There was a greater desire to send staff from China to Thailand for training, but this was not identified as an activity in the project. My belief is that Fairylake is unlikely to make a great input to the project and that the project's ex situ cultivation targets will be mostly met by Nongnooch.

De La Salle University (Philippines) - This institute is keen to engage in the project and the project leader has already scheduled a visit the UK for the summer of 2015, for training and discussions, drawing on (additional) institutional rather than DI funds.

WCMC – Staff contributed to the Advisory Board meeting in July 2014. WCMC has been reviewing commitments in the project submission and, based on up-to-date costings, will provide trade data at a lower frequency (i.e. not annually) than originally planned. This will not detract from the ambition to have Uganda report trade data on a more regular basis.

3. Project Progress

3.1 Progress in carrying out project activities

In brief,

- The full MoU with the main partner (JERA) was resolved and signed off in Year 1. SANBI and Kew already have a working partnership and letters of agreement have been issued to the other collaborating institutes.
- Project initiation activities have included: 1) Advisory Board meeting in July 2014; 2) visits to Uganda and South Africa, in July 2014, and to Thailand and China, in September 2014.

NB Details also in full Progress Table (Annex I) below

Output 1 - Increased biodiversity knowledge for non-detriment findings on Ugandan endemic and endangered cycads

- (**Activity 1.1**) Agreement with local authorities (i.e. in the community areas) for JERA to carry out field study and seed/pollen collecting given during meeting with Kew team when visiting Uganda in July 2014 (activity 1.1).
- (**Activity 1.2**) Field studies undertaken to three species' sites and phenology recorded; but summaries have not be received.
- (**Activity 1.3**) NA in Y1
- (**Activity 1.4**) Data collection is ongoing at Nongnooch and will be shared; but Fairlylake seem unlikely to do so. It is proposed to maintain communications with Fairylake but to downgrade ambitions for their active involvement in the project.
- (**Activities 1.5, 1.6**) NA in Y1

Output 2 - Improved monitoring of cycad trade in and out of Uganda

- (**Activity 2.1**) The delayed training of the Ugandan scientists in SE Asia (Thailand) in November 2014, resulted in difficulties scheduling the micro-chip / DNA technology at SANBI. This is now anticipated in the first 6 months of Y2.
- (**Activities 2.2, 2.3**) NA in Y1
- (**Activities 2.4, 2.5**) An annual project report has not been submitted to CITES and CBD focal points. However, the project was introduced to the CITES office in Kampala and Bangkok, and copies of 'CITES and CYCADS' (hardcopy and CD) provided. A visit was also made to the State Forestry Administration in Beijing and a copy delivered to Mr LIU Dewang (Plant Protection). These were welcomed by staff, who wanted to know how best to implement training. This is for further discussion.
- (**Activity 2.6**) WCMC have extracted historic trade data on *Encephalartos* but information of the target Ugandan species has not be collated yet, mainly as Uganda is not prompt in submitting such data to the international authorities.

Output 3 - Reduced demand for wild sourced cycads

- (**Activity 3.1**) The market survey at four local market towns (Fort Portal, Ibanda, Kasese and Mbarara) was not conducted in Y1. This and other delays is why the project leader plans to visit Uganda again in the first six months of Y2 to encourage closer attention to targets and to catch up with the work plan.
- (**Activity 3.2**) Suitable plots for nursery work were agreed between JERA and the local communities in the villages of Ntarama and Karuhuguma during the visit of the Kew team in July 2014. However, it is not believed that the nursery plot is established (i.e. fenced and 'secure').
- (**Activity 3.3**) Some seed has been collected for the nursery.
- (**Activities 3.4,3.5**) NA in Y1.

Output 4 - Strengthened capacity of Ugandan scientist and horticultural staffs in cycad cultivation and knowledge transfer

- **(Activity 4.1)** Two Ugandan scientist/horticulturalist were trained for 3 weeks (6 person weeks) at Nongnooch (Thailand). Based on a review of capabilities during the Kew team visit to Uganda in July 2014, it was deemed critical for the Ugandan scientists to get a thorough grounding in cycad cultivation by staying at Nongnooch rather than coming to the UK for lab training. See training report.

- **(Activity 4.2)** There is regular contact between JERA and the students at Makerere University, but no formal lectures given yet. The project leader will lecture at the university during his newly proposed visit there in Y2.
- **(Activity 4.3)** The plan is to organise a project in Uganda at the end of Y3. It would be ideal however to hold a mid-term meeting for the project partners. Having discussed the project ambition at the British High Commission in Kampala in July 2014, it was agreed that the Kew team should submit a project concept to the FCO for a mid-term meeting in December 2015. This was sent to Richard Cox in Kampala in September 2014, but the bid for £5000 was unsuccessful.
- **(Activity 4.4)** NA in Y1
- **(Activity 4.5)** JERA staff and SANBI staff met once in Y1, in Uganda in July 2014.
- **(Activity 4.6)** Writing information leaflets is only just starting at the end of Y1
- **(Activity 4.7)** The project was introduced to staff and students at SANBI when Pritchard gave a research seminar there to 20 people in July 2014. uPhakamani will make a contribution on his *Encephartos* studies at the 10th International Conference on Cycad Biology (Colombia, Aug 2015).

Output 5 - Community cycad projects established in Uganda

- (**Activity 5.1, 5.2, 5.3**) Consultation with two communities (villages of Ntarama and Karuhuguma), including primary school teachers, took place during the Kew team visit in July 2014. The team met 30 people from the local community in Kamwenge and nine people from the local community in Mayuge (see map above for general location and the 'Africa visit' and 'Field visits' reports). The individual(s) within the community responsible for the nursery activities were identified.
- (**Activity 5.4**) NA in Y1
- (**Activity 5.5**) Progress was made by visiting the Rwenshama School Management. The primary school is under headship of Mr. Tibananukira Eldard, assisted by Mr. Twijuike Pius, and has a population of 651 pupils, i.e. 332 boys and 319 girls. The school management was also positive to embrace project interventions through the school programme 'CYCADS for Children'. The administration will actively engage the pupils in the project in appropriate areas of the project. In addition they promised to offer a piece of land for the establishment of a CYCAD nursery. It was planned that towards the end of Y1 some of the programme materials would be drafted; but this has not happened yet. The real impact will be judged in Y3.

3.2 Progress towards project outputs

Output 1 - At least two trips to the field (to record baseline data on autecology and reproductive biology) have been made in Uganda, in July-Aug 2014 and early in 2015. However, no field work reports have been received (**indicator 1**). The elasticity analysis approach has been reviewed by SANBI and, on reflection, the feeling is that three years data will not really be enough to do this type of analysis. Alternative analyses are being considered in relation to the sustainability / health of populations (**indicator 2**). The Kew team were shown the ongoing ex situ cultivation / collections records for the SANBI and Nongnooch *Encephalartos* species during the visits (**indicator 3**); securing such data from Fairylake now seem unlikely (see comments above).

Output 2 – The only output to address in Y1 was the provision of 'New and updated data from DI project report(s) to CITES and CBD authorities' (**indicator 2**) However, the project has insufficient data yet to do this. Information flow to the authorities in Uganda is anticipated in the first 6 months of Y2.

Output 3 – Indicators (**1-4**) are set for Y2 and Y3 only. However, steps have been taken on the location of the nursery.

Output 4 - Two full time Ugandan scientist/horticultural staffs were trained for three weeks at Nongnooch in 2014 (**indicator 1; see training report**).

Output 5 - **Indicators** (**1-3**) are set for Y2 and Y3 only.

3.3 Progress towards the project Outcome

The outcome is 'Knowledge generation and transfer, institutional capacity building and community awareness actions reduce threats to Uganda's endangered and endemic cycads.'

Indicator 1 - Field work (autecology) is ongoing for three endangered Encephalartos cycads (from one to three species) as planned. It is too early to say how complete the studies will be such that robust non-detriment findings will be produced. This will become much clearer in Y2 and Y3.

Indicator 2 - Only the first steps have been taken towards improved assessment of illegal collecting and trade of three Ugandan cycads species by analysing trade data through UNEP-WCMC. The local market survey had not been completed by the end of Y1. However, contact had been established with the CITES and CBD offices in Kampala and Bangkok, and copies of 'CITES and CYCADS' were delivered in person. John Donaldson's role at SANBI and LI Nan's role at Fairylake, which include national cycad trade and conservation responsibilities, confirmed that the appropriate authorities had access to this publication. Nonetheless, Pritchard visited the State Forestry Administration in Beijing in September 2014 to hand over a copy to Mr LIU Dewang, the Director of the Plant Protection Division. SFA recently issued Wild Plant Cultivation and Utilization Development Guidance that included supporting livelihood development for farmers collecting and using forest medicine resources. It is hoped that this can serve as a template for guidance on cycads in the trade.

Indicator 3 - Only the first steps have been taken to achieving this outcome of reducing demand for wild-sourced cycads; through agreement with the local communities to produce seedlings in local nurseries.

Indicator 4 - The two-fold increase in JERA's capacity is underway, with Dennis Kamago (existing) benefitting from training and his (new) assistant. At least one more staff member must be trained for this outcome to be achieved. Training has been strongly supported by IUCN Cycad Specialist Group member Anders Lindstrom (Nongnooch, Thailand) and John Donaldson (SANBI, RSA) in facilitating his assistant's (uPhakamani Xaba) role in the project. Regular communication with the Philippines early in the project bodes well for KT in Y3. Starting the compendium (on cultivation) is a key activity in Y2 and a better feel for attainment of the outcome will be known by the end of the year.

Indicator 5 - Already two new villages have been introduced to the project with meetings held with 40 people. And buy-in achieved with a large school of > 600 children. Starting the nursery activity is behind schedule, and the total seedling production might be a challenge. But the schools programme should take off in Y2 and the outcome be achieved.

3.4 Monitoring of assumptions

Outcome risks:

		2014-15 update
Assump-tion 1	Natural disasters do not severely affect the natural population causing reduced availability of plants, seeds and pollen for conservation and sustainable use actions.	No change
Assump-tion 2	Political conflicts and socioeconomic crises do not accelerate threats to natural populations and reduce access to lands.	Fire in the Queen Elizabeth National Park as a result of poachers (socio-economic) was observed close to the *E. whitelockii* population. Assume such risk will be minimised due to presence of local community.

Assumption 3	All international partners and their institutes remain committed to the delivery of the project goals, good governance remains in place and staff changes are minimal.	All partners strongly committed to the project except Fairy Lake. Its role is not large and stronger links with and interaction with Nongnooch anticipated to counteract any impact.

Output risks:

Assumption 1	1. Natural disasters do not reduce access to natural populations and impact on field studies; and there is no catastrophic fall in pollinators or change in male/female cone production synchrony leading to no seed production. 2. Enabling partners remain committed to providing complementary data on reproductive biology of *Encephalartos* cycads in ex situ collections. Risk minimised by having three enabling partners (SANBI, Nong Nooch Tropical Botanical Garden and Fairy Lake Botanical Garden) who both have extensive cycad collections of mature plants.	No change. SANBI and Nongnooch will provide complementary data but FairyLake probably not. Plan to interact even more with Nongnooch in future to counteract effect.
Assumption 2	1. Micro-chip (and DNA spray) technology is transferable and can be reliably used on a range of species. 2. CITES reports produced by countries importing cycads from Uganda are presented annually and accurately to enable valid trade data analysis. Risk minimised by cross referencing details of import and export country reports.	No change. This is likely to change as Uganda is notoriously late submitting such data. The assumption now should be that by the end of the project there is evidence that Uganda is meeting its reporting obligations more promptly.
Assumption 3	1. Natural seed production is not too low for seed collection, thus hindering cultivation. Risk minimised by securing seed access from *ex situ* collections at enabling partners (SANBI, Nong Nooch Tropical Botanical Garden, Fairy Lake Botanical Garden). 2. Nursery plots not lost due to changes in land ownership. Risk minimised by identifying alternative site for back-up nursery.	No change. No change.
Assumption 4	1. No insurmountable challenges in securing visas for JERA staff to train in other countries. Risk minimised through early applications for visas. 2. Essential, trained staffs leave the project. Risk minimised by training two scientists and followed by cascade training in Uganda.	The challenge of securing visas for JERA staff to visit China were insurmountable. Staff spent longer at Nongnooch (Thailand) to offset the impact. No change
Assumption 5	1. Communities remain committed to cycad conservation efforts. Risk minimised by carefully selecting the communities that JERA has previous experience of collaborating with.	No change

3.5 Impact: achievement of positive impact on biodiversity and poverty alleviation

There is a continuing strong commitment to raising awareness of the potential worth of biodiversity. Whilst the species leaflets have not been produced yet, scientific promotion has started: 1) Pritchard lecture at SANBI in 2014; 2) Xaba presentation accepted for Cycad Seed Biology meeting in 2015; 3) Pritchard booked to address Lichfield Science and Engineering Society in April 2015, >100 people on the theme of Seeds as Natural Capital; 4) Pritchard a guest speaker at the Kent Agricultural Show, 2014. And governance supported through direct visits to CITES staff in Uganda, Thailand and China. The project has also been promoted in Kew Scientist (Spring 2014 Issue 45, page 3; ISSN: 0967-8018). A popular article has been drafted but not yet submitted for publication.

This project, under the Defra part of the DI call, has modest ambitions regarding local community livelihoods. It is too early to have figures on the potential benefits of nursery activity, as the work in not fully underway, i.e. 'ground not cut'.

4. Project support to the Conventions (CBD, CMS and/or CITES)

Ambition: The project assists delivery of Uganda's National Biodiversity Strategy and Action Plan (NBSAP)[2] and implementation of CBD-linked (articles) objectives: a) develop and strengthen co-ordination, measures and frameworks for biodiversity management (6, 8, 9,11); b) facilitate research, biodiversity information management and exchange (7,12, 16, 18); c) reduce and manage negative impacts on biodiversity (8, 9,14); d) promote sustainable use and equitable sharing of costs/benefits of biodiversity (8, 10, 15); e) enhance awareness on biodiversity among stakeholders (13). There is strong synergy with GSPC (2010-20) and Aichi Biodiversity Targets, particularly the protection of threatened and socio-economically important species (12,13), functioning ecosystems (14, 15) and participation of local communities (18, 19). Contact is already established with CITES in partner countries.

Evidence to date: Visits to two communities in Uganda to agree project objectives, including nursery work; visit to primary school in Uganda to discuss 'Cycads for Children' programme; meetings at CITES offices in Uganda, Thailand and China; JERA is keeping Meri Sabino Ogwal at Uganda's CBD (NEMA) focal point and Mr Ouna Jimmy at CITES-Flora (under National Forestry Authority) up to date on project developments; commitments already made to deliver four lectures that introduce the project ambitions.

5. Project support to poverty alleviation

See comments above on this Defra project under 3.5.

6. Project support to Gender equity issues

In Uganda, the discussions were held with 40 people in two communities, with a mix of genders. We did not simply meet with the village elders to discuss field access and nursery work. When the nursery work is in full flow we will review the gender balance on activities. The 'Cycads for Children' programme will be based at Rwenshama Primary School, with a near equal number of boys (332) and girls (319) (**Outcome indicator 5; Output 5, indicator 5**).

On the management side, the original project partner gender balance was four female (Kew project manager, WCMC member, China member and Philippines member) and four male (Kew project lead, Uganda partner, RSA partner and Thailand partner. With Dr Jayanthi Nadarajan's project manager role being taken on by Dr Moctar Sacande, the gender balance is now five male and three female.

7. Monitoring and evaluation

The project has followed Kew's established project monitoring, evaluation and financial accounting protocols, SMART indicators and milestones, etc. However, the understanding and interpretation of these by our African partners in Uganda (less an issue with RSA) still requires work. Substantially improved reporting performance is anticipated in Y2.

The Darwin Initiative's internal reporting system has been complied with, such that the 6 monthly report was submitted on time. A slight delay of two weeks was requested (and approved) concerning the submission of the Annual Report 2014-15, as the new management team (Pritchard, Sacande) caught up with business after the departure from Kew of Dr Jayanthi Nadarajan (project manager).

The Advisory Board met in July 2014 (see minutes of the meeting provided) which clarified roles and responsibilities.

We anticipated the requirement to set up a web-based project meeting facility so as to connect project partners on three continents. Pritchard has been trialling such a system, GoToMeeting, within another project, including the successful delivery of a one hour (+Q&A) web seminar. Pritchard will now investigate the implications of using such a system (cost; bandwidth).

8. Lessons learnt

Didn't work well: See comments elsewhere regarding general communications and receipt of reports from Uganda. On the Kew management side, there has been a full science programme restructuring, involving reallocation of staff to new departments and applications and interviews for posts. This has meant that the Kew Team (PL, PM) had uncertainties about their futures from September 2014 until March 2015. The situation is resolved now and no further impacts on the Kew team are anticipated.

Did work well: The consultation with the two communities (**Indicator 5.1**) generated tremendous good will and resulted in solid feedback on the plans. Similarly, the training of the Ugandan scientists at Nongnooch (**Indicator 4.1**) was an obvious success (see report provided).

Already we have decided to restrict our engagement with Fairy Lake and to work more closely on the ex situ cultivation with Nongnooch.

Our general recommendation is that it is difficult to be certain about the functionality of institutes and individuals when you are entering into a joint project for the first time. However, by visiting them in the early part of the project, and based on subsequent interaction, you should be able to decide by the end of Y1 whether to adjust the anticipated level of engagement upwards or downwards, to the benefit of the project.

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

NA

10. Other comments on progress not covered elsewhere

NA

11. Sustainability and legacy

The project profile is good with the formal authorities in Uganda (CITES, CBD and the British High Commission) and the two communities and regional administrations. But the project is less well known by the general public with no public announcement in the newspapers. This is both a blessing (not revealing the location of endangered plants) and a curse (not promoting widely the importance of the project). We will do more in Y2 to generate wider interest through the writing of popular articles for the Ugandan press, and to increase interest and capacity by inspiring local university students. Key to sustained legacy will be the success of the 'Cycads for Children' project.

Importantly, Kew has increased its commitment to Uganda, which has been identified in the new Science Strategy (2015-20; http://www.kew.org/sites/default/files/Kew%20Science%20Strategy%202015-2020%20Single%20pages.pdf) as one of seven Tropical Important Plant Areas (TIPA) to work in. The ambition is for species delimitation and mapping to feed directly into conservation prioritisation for delivery of on-the-ground conservation actions by our partners.

Two staff of JERA have been trained this year (Dennis Kamoga and one assistant). In Y2 a second new member of staff will be identified and supported through training.

12. Darwin Identity

The DI Cycad project has a clear identity, and the DI scheme is known in the Uganda, and in the other countries we are working with, as a promoter of biodiversity conservation and sustainable use. So far, the DI logo has only been used during the lectures given on 'Seeds and Natural Capital' within which the ambitions of the cycad project have been detailed.

13. Project Expenditure

Please expand and complete Table 1.

Table 1 Project expenditure during the reporting period (1 April 2014 – 31 March 2015)

Project spend (indicative) since last annual report	2014/15 Grant (£)	2014/15 Total Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)				
Consultancy costs				
Overhead Costs				
Travel and subsistence				The anticipated part of Pritchard's costs for launching the project in China from another China project budget line (value added) was unaccepted as entry to the country was via Thailand not direct. Also the visit to all four countries by the PL and PM was not initially planned, but was deemed important to ensure relations were built, including with CITES offices in three of the countries.
Operating Costs				The underspend is mainly a result of the delay in the local market survey (£1000), the delay to the launch of the school programme (£ 1000) and the slow start to establishing the nursery (£1540)
Capital items (see below) incubator, freezer				The underspend is due to good value for money
Others (see below) consumables, recruitment, printing				
TOTAL			**3**	

The total costs were £60,458 instead of £62,195, which is 3% below budget (i.e. £1737). The overspend on the travel was offset by the value-for-money underspend on the capital items. The Project Leader would like to carry forward to 2015-16 the £1737 underspend, so as to counterbalance the slow spending under Operating Costs for the market survey, school programme and nursery work. This is only now being discussed with the DI scheme programme management.

14. OPTIONAL: Outstanding achievements of your project during the reporting period (300-400 words maximum). This section may be used for publicity purposes

I agree for the Darwin Secretariat to publish the content of this section (please leave this line in to indicate your agreement to use any material you provide here)

Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2014-2015

Project summary	Measurable Indicators	Progress and Achievements April 2014 - March 2015	Actions required/planned for next period
Impact Productive cycad biodiversity conservation collaboration between Africa and Asia will support the global delivery of the IUCN CGS 'Status Survey and Conservation Action Plan 2004'		Extremely start with two communities, who are actively involved in the project, and sharing their views on the schools programme and the nursery work.	[redacted]
Outcome Knowledge generation and transfer, institutional capacity building and community awareness actions reduce threats to Uganda's endangered and endemic cycads	1) Three-fold increase in detailed autecology knowledge; 2) Improved assessment of illegal trade, improved training of enforcement officers; 3) Reduced demand for wild plants through seedling production; 4) 2-fold increase in JERA's capacity to conserve, through staff training; 5) 2-fold increase in conservation awareness by community, and outreach to children	1) Ongoing 2) Ongoing 3) Starting 4) Two staff trained including the local project manager 5) Two new villages involved in the project (2-fold increase) and 40 people in local community consulted and made aware of project and biodiversity conservation	1) Full reports on the autecology of the three main species 2) First trading report expected and evidence will be sought of how CITES and CYCADS is being used by authorities; 3) Nursery work must take off; 4) One JERA staff to be trained; 5) School's programme fully launched.
Output 1. Increased biodiversity knowledge and non-detriment findings on Ugandan endemic and endangered cycads	1) Six bi-annual field study reports over 3 years (from NIL) generating baseline data on autecology and reproductive biology for E. equatorialis, E. macrostrobilus and E. whitelockii. (Years 1- 3) 2) Enhanced knowledge on population trends and habitat degradation assessed for three species (from NIL) through completion of an 'Elasticity Analysis'. (Y3) 3) Biodiversity data on c. 20 other closely related Encephalartos sp. enhanced through inputs of historical /	1) No Y1 report received; will be chased early in Y2. Target remains appropriate. 2) Population trends being monitored and to continue in Y2. Target remains appropriate. 3) Data being collected but no Y1 summary supplied; significant collation will happen in Y2 as 'cultivation manual' drafting gets underway, but likely little input from Fairy Lake (China). Target remains generally appropriate.	

	current information from world-leading ex situ collections at SANBI (RSA), FLBG (China) and NNTBG (Thailand) (Y1-3)	
Activity 1.1 Establish agreement with local authorities for field study and seed/pollen collecting permission		Agreement with local authorities (i.e. in the community areas) for JERA to carry out field study and seed/pollen collecting given during meeting with Kew team when visiting Uganda in July 2014.
Activity 1.2, Conduct field study to evaluate population size, distribution, phenology and meteorological data of E. equatorialis, E. macrostrobilus and E. whitelockii.		Field studies undertaken to three species' sites and phenology recorded; but summaries have not be received.
Activity 1.3, Undertake 'Elasticity Analysis' on the population data to simulate population trends		NA in Y1
Activity 1.4, Collect reproductive biology data for other closely related Encephalartos sp from SANBI, Nong Nooch Tropical Botanical Garden and Fairy Lake Botanical Gardens' ex situ collections.		Data collection is ongoing at Nongnooch and will be shared; but Fairlylake seem unlikely to do so. It is proposed to maintain communications with Fairylake but to downgrade ambitions for their active involvement in the project.
Activity 1.5, Write two peer-reviewed papers (on population trends of Ugandan cycads and another on cycad pollen and seed biology)		NA in Y1
Activity 1.6, Write an e-compendium volume of Encephalartos biology and cultivation		NA in Y1
Output 2. Improved monitoring and assessment of cycad trade in (and out of) Uganda	1) 50% of the wild populations of three species micro-chipped by end Y3; 2) New and updated data from DI project report(s) delivered to CITES and CBD authorities (Y1-3) to support their production of country annual reports; 3) Enhanced enforcement training of at least five Ugandan officers through use of a new training pack on 'CITES and Cycads' (Y3); 4) Increased evidence-base data on (over)exploitation of a minimum of three Ugandan endemic and endangered cycads through world trade data (UNEP-WCMC) and local market survey. (Y1-3)	1) Training this technology yet to be delivered; ambition for this to occur in first 6 months of Y2; Target remains appropriate. 2) Data slow to come in to Kew team and thus not delivered to CITES / CBD; ambition to send Y1 data in first six months of Y2. Target remains appropriate. 3) CITES AND CYCADS delivered by hand to authorities in Uganda, Thailand and China in Y1 (and well known RSA due to partner Donaldson being the author). Y2 to explore how authorities have put the CD and book to use. Target remains appropriate. 4) Preliminary trade assessment made by WCMC, but have indicated preference not to do this annually. Market survey not completed in Y1 and thus key target for first 6 months of Y2. Target remains generally appropriate.

Activity 2.1. Ugandan scientists trained by SANBI partner in micro-chipping cycads by end of Y1		The delayed training of the Ugandan scientists in SE Asia (Thailand) in November 2014, resulted in difficulties scheduling the micro-chip / DNA technology at SANBI. This is now anticipated in the first 6 months of Y2.
Activity 2.2. Matured plants identified in the natural population for micro-chipping by middle of Y2		NA in Y1
Activity 2.3. Identified matured plants micro-chipped by end of Y2		NA in Y1
Activity 2.4. Submit project report (annually) to CITES and CBD focal points before their annual report is due		An annual project report has not been submitted to CITES and CBD focal points. But will be early in Y2
Activity 2.5. Training of Ugandan enforcement officers using the 'CITES and Cycads' training CD Rom.		The project was introduced to the CITES office in Kampala and Bangkok, and copies of 'CITES and CYCADS' (hardcopy and CD) provided. These were welcomed by staff, who wanted to know how best to implement training. This is for further discussion.
Activity 2.6. Collate trade data for E. equatorialis, E. macrostrobilus and E. whitelockii to understand the demand and supply chain.		WCMC have extracted historic trade data on *Encephalartos* but information of the target Ugandan species has not be collated yet, mainly as Uganda is not prompt in submitted such data to the international authorities.
Output 3. Significantly reduced demand for wild sourced cycads	1) Production of ~2,500 nursery seedling for all three species through local community nursery project in the villages of Ntarama and Karuhuguma. (Y2-3) 2) 10% increment in natural population sizes in three sites through replanting of nursery-raised plantlets (Y3) 3) 50% reduction in demand for wild sourced cycad material (seed, seedling) through sale of nursery-raised plants (Y3) 4) Decline in international trade on Ugandan wild sourced cycads (Y3)	1) Little / no progress planned in Y1. <u>Target remains appropriate.</u> 2) Little / no progress planned in Y1. <u>Target remains appropriate.</u> 3) Little / no progress planned in Y1. <u>Target remains appropriate.</u> 4) Little / no progress planned in Y1. <u>Target remains appropriate.</u>
Activity 3.1. Conduct market survey at four local market towns (Fort Portal, Ibanda, Kasese and Mbarara)		The market survey at four local market towns (Fort Portal, Ibanda, Kasese and Mbarara) was not conducted in Y1. This and other delays is why the project leader plans to visit Uganda again in the first six months of Y2 to encourage closer attention to targets and to catch up with the work plan.

Activity 3.2. Suitable plot for nursery agreed between JERA and the local communities in the villages of Ntarama and Karuhuguma		Suitable plots for nursery work were agreed between JERA and the local communities in the villages of Ntarama and Karuhuguma during the visit of the Kew team in July 2014. However, it is not clear if the nursery plot is established (i.e. fenced and 'secure').
Activity 3.3 Collect (and receive) seed and set up germination trial in the nursery		Some seed has been collected for the nursery.
Activity 3.4 Seedlings replanted in the natural habitat in Y2 and monitored into Y3		NA in Y1.
Activity 3.5, Sell surplus seedlings from nursery to local community (mainly Y3)		NA in Y1.
Output 4. Strengthened knowledge and capacity of Ugandan staff and the cycad community involved in conservation and sustainable use	1) Two full time Ugandan scientist/horticultural staffs trained by end Y1; 2) Project workshop in Uganda at the end of Y3 to share knowledge with the wider cycad community and to celebrate success of the project with local community and children; 3) Cascade training by Ugandan scientist to Philippine scientists/ horticulturists (Y3), increasing local cycad conservation knowledge from 5 to 20 staff; 4) Value of Ugandan endemic cycad biodiversity in local and global conservation action communicated to wider cycad conservation community, local government, local communities, schools through scientific publications, talks, guidelines on best practise and cascade training. (Y2, 3)	1) One staff member trained and JERA leader skills enhanced in Y1. One more staff member to be trained in Y2. Target put back to Y2. 2) Little / no progress planned in Y1. But attempted to secure FCO funding for mid-term meeting in Dec 2015 (unsuccessful). Target remains appropriate. 3) Little / no progress planned in Y1. But Philippines partner in regular email contact and university is starting to establish its botanic garden (to include cycad area). Target remains appropriate. 4) Little / no progress planned in Y1. Although four conference and public talks (to about 400 people) have been given or committed to (early in Y2). Planned popular article drafted but not submitted. Science publications to come later. Target remains appropriate.
Activity 4.1. Train two Ugandan scientist/horticulturalist through a short term scientific missions in NNTBG, FLBG and the UK for 6 weeks		Two Ugandan scientist/horticulturalist were trained for 3 weeks (6 person weeks) at Nongnooch (Thailand). Based on a review of capabilities during the Kew team visit to Uganda in July 2014, it was deemed critical for the Ugandan scientists to get a thorough grounding in cycad cultivation by staying at Nongnooch rather than coming to the UK for lab training. See training report.

Activity 4.2. In house (and cascade) training of other members of staff at JERA and (>50) students of Makerere University		There is regular contact between JERA and the students at Makerere University, but no formal lectures given yet. The project leader will lecture at the university during his visit there in Y2.
Activity 4.3 Organise a project workshop in Uganda by end of Y3		The plan is to organise a project in Uganda at the end of Y3. It would be ideal however to hold a mid-term meeting for the project partners. Having discussed the project ambition at the British High Commission in Kampala in July 2014, it was agreed that the Kew team should submit a project concept to the FCO for a mid-term meeting in December 2015. This was sent to Richard Cox in Kampala in September 2014, but the bid for £5000 was unsuccessful.
Activity 4.4 Cascade training on cultivation of cycads to around 20 staffs of De La Salle University, Philippines as they develop an institutional botanic garden.		NA in Y1
Activity 4.5 Ongoing training and progress meeting between JERA project manager and S. African partner (SANBI) once every 6 months.		JERA staff and SANBI staff met once in Y1, in Uganda in July 2014.
Activity 4.6 Write and distribute information leaflets on at least three cycad species, in English and Swahili.		Writing information leaflets is only just starting at the end of Y1
Activity 4.7 Present findings in scientific conference (Y2, 3), at final workshop (Y3) and public talks (Y1-3).		The project was introduced to staff and students at SANBI when Pritchard gave a research seminar there to 30 people in July 2014. uPhakamani will make a contribution on his *Encephartos* studies at the 10th International Conference on Cycad Biology (Colombia, Aug 2015).
Output 5. Community cycad projects (plant nursery and schools programme) established in Uganda	1) Number of local communities involved in cycad conservation project increased from two to four by end Y3; 2) Number of people to be directly employed to work part-time in the new nursery project increased from 0 to 40 (Y2, 3); 3) Educational programme 'Cycads for Children' included in school activities to promote understanding of the value of cycad biodiversity and its conservation (Y2,3)	1) Two new communities involved in Y1, but fully operational nursery not yet achieved. <u>Target remains appropriate</u> 2) Communities and 40 people identified and meetings held. <u>Target remains appropriate</u> 3) Rwenshama Primary School visited in Y1. <u>Target remains appropriate</u>
Activity 5.1. Consultation with two communities (villages of Ntarama and Karuhuguma), including primary school teachers, on awareness of conservation and sustainable use issues		Consultation with two communities (villages of Ntarama and Karuhuguma), including primary school teachers, took place during the Kew team visit in July 2014. The team met 30 people from the local community in Kamwenge and nine people from the local community in Mayuge (see map above for general location and the 'Africa visit' and 'Field visits' reports).
Activity 5.2. Draft agreement between JERA and two local communities on rota		Agreement reached between JERA and the two villages / communities

for part-time work in nursery	
Activity 5.3. Appoint local community nursery project manager to oversee activity and progress	The individual(s) within the community responsible for the nursery activities were identified.
Activity 5.4. Training of local people in cycad seed collection and cultivation	NA in Y1
Activity 5.5. Develop and delivery of 'Cycads for Children' school programme	Progress was made by visiting the Rwenshama School Management. The primary school is under headship of Mr. Tibananukira Eldard, assisted by Mr. Twijuike Pius, and has a population of 651 pupils, i.e. 332 boys and 319 girls. The school management was also positive to embrace project interventions through the school programme 'CYCADS for Children'. The administration will actively engage the pupils in the project in appropriate areas of the project. In addition they promised to offer a piece of land for the establishment of a CYCAD nursery. It was planned that towards the end of Y1 some of the programme materials would be drafted; but this has not happened yet. The real impact will be judged in Y3.

Annex 2 Project's full current logframe

Project summary	Measurable Indicators	Means of verification	Important Assumptions
Goal: Effective contribution in support of the implementation of the objectives of the Convention on Biological Diversity (CBD), the Convention on Trade in Endangered Species (CITES), and the Convention on the Conservation of Migratory Species (CMS), as well as related targets set by countries rich in biodiversity but constrained in resources.			
Outcome: **Knowledge generation and transfer, institutional capacity building and community awareness actions reduce threats to Uganda's endangered and endemic cycads**	1) Three-fold increase in detailed autecology knowledge for endangered Encephalartos cycads (from one to three species) through annual population studies contribute to first available non-detriment findings. 2) Improved assessment of illegal collecting and trade of three Ugandan cycads species by analysing trade data through UNEP-WCMC and via local market surveys of supply and demand, enhanced training of enforcement officers through use a new (Dec 2013 launch) training pack on 'CITES and Cycads' developed by the Conventions and Policy Section of Kew and increased (at least a doubling) regularity of communications with CITES (and CBD) authority. 3) Reduced demand for wild sourced cycads by 25 to 67% by producing 200 seedlings of E. equatorialis (67% of wild population size), 300 seedlings of E. macrostrobilus (~25%) and 2000 seedlings of E. whitelockii (~25%) for natural population restoration and to sell to local communities thereby reducing threat to natural populations. 4) Two-fold increase in JERA's capacity (from two to four people) to conserve and sustainably use (cultivate) cycads through training visits supported by IUCN Cycad Specialist Group members	1) ●Annual field study reports including population size, distribution, phenology and meteorological data; ● A report on population trend analysis using 'Elasticity Analysis' (Raimondo & Donaldson, 2003); ● Annual reports on closely related Encephalartos sp reproduction cycle from partners managing ex situ collections. 2) ●Annual trade figure on Ugandan cycads by UNEP-WCMC; ●Reports of local cycad market surveys on supply and demand; ●Records of training of Ugandan enforcement officers using the 'CITES and Cycads' training CD Rom; ●Annual project reports to CITES (and CBD) authorities to facilitate them in the production of annual country reports; ● An inventory of micro-chipped cycads in the natural population. 3) ●Photographic evidence of replanted population; ●Records of seedling sales from nursery; ●Trade data report showing decline in sale figure for wild-sourced cycads. 4) ● Assessment questionnaires (pre- and post-training) of learning outcomes and implementation of two Ugandan staff; ●Two open access co-authored peer-reviewed papers on endangered cycad autecology / reproductive biology / population trends; ● e-Compendium volume of Encephalartos cultivation;	A) Natural disasters do not severely affect the natural population causing reduced availability of plants, seeds and pollen for conservation and sustainable use actions. B) Political conflicts and socioeconomic crises do not accelerate threats to natural populations and reduce access to lands. C) All international partners and their institutes remain committed to the delivery of the project goals, good governance remains in place and staff changes are minimal.

	and their institutes. Country capacity further strengthened through KT in Uganda and to the Philippines and wider community through new compendium on cultivation, scientific and technical publications, talks, and other communications. 5) Two-fold increase in awareness of the importance of biodiversity and local community involvement in cycad conservation and sustainable use (from two to four villages and 40 to 80 people) directly through the setting up of a community plant nursery, and supported by outreach to 70% of children in Rwenshama primary school (i.e. 350 out of 500).	●Information leaflets on at least three species in English and Swahili; ● Conference records (e.g. abstracts) of talks given, web articles on BGCI, IUCN sites, annual reports, etc. ●Report on value of compendium during cascade training in Philippines. 5) ●Photographic evidence of community nursery establishment; ●Audit of nursery set up for functionality and security. ● Report on 'Cycads for Children' school programme and stories written by children.	
Outputs: **1**. Increased biodiversity knowledge and non-detriment findings on Ugandan endemic and endangered cycads	1a. Six bi-annual field study reports over 3 years (from NIL) generating baseline data on autecology and reproductive biology for E. equatorialis, E. macrostrobilus and E. whitelockii. (Years 1- 3) 1b. Enhanced knowledge on population trends and habitat degradation assessed for three species (from NIL) through completion of an 'Elasticity Analysis'. (Y3) 1c. Biodiversity data on c. 20 other closely related Encephalartos sp. enhanced through inputs of historical / current information from world-leading ex situ collections at SANBI (RSA), FLBG (China) and NNTBG (Thailand) (Y1-3)	1.1. Records of field training/work attendance by participating partners 1.2. Autecology and reproductive biology data for E. equatorialis, E. macrostrobilus and E. whitelockii submitted with Annual and Final Report. 1.3. Population trend of the above three cycads written up as a manuscript for scientific journal. A copy sent with Final Report. 1.4. Baseline data on other closely related Encephalartos sp from SANBI (RSA), FLBG (China) and NNTBG (Thailand) ex situ collections submitted with Annual and Final Report. 1.5. e-Compendium on Encephalartos cultivation and conservation biology compiled and available online, and printout submitted with the Final Report.	1. Natural disasters do not reduce access to natural populations and impact on field studies; and there is no catastrophic fall in pollinators or change in male/female cone production synchrony leading to no seed production. 2. Enabling partners remain committed to providing complementary data on reproductive biology of Encephalartos cycads in ex situ collections. Risk minimised by having three enabling partners (SANBI, Nong Nooch Tropical Botanical Garden and Fairy Lake Botanical Garden) who both have extensive cycad collections of mature plants.
2. Improved monitoring and assessment of cycad trade in (and out of) Uganda	2a. 50% of the wild populations of three species micro-chipped by end Y3 2b. New and updated data from DI	2.1.Training record of micro-chipping by SANBI partner to JERA staffs 2.2. Identification and documentation of	1. Micro-chip (and DNA spray) technology is transferable and can be reliably used on a range of species.

	project report(s) delivered to CITES and CBD authorities (Y1-3) to support their production of country annual reports. 2c. Enhanced enforcement training of at least five Ugandan officers through use of a new training pack on 'CITES and Cycads' (Y3) 2d. Increased evidence-base data on (over)exploitation of a minimum of three Ugandan endemic and endangered cycads through world trade data (UNEP-WCMC) and local market survey. (Y1-3)	mature cycad plants in the wild for potential micro-chipping by Y2. 2.3. Inventory of micro-chipped cycad plants in the natural population compiled and sent with Annual Report. 2.4. Project reports submitted to Ugandan CITES and CBD focal points to support their annual country reporting. 2.5. Records of training of Ugandan enforcement officers using the 'CITES and Cycads' training CD Rom 2.6. Annual trade figures of Ugandan Endemic cycads compiled by UNEP WCMC and submitted in Annual and Final Reports. 2.7. Local market survey on supply and demand of cycads complied and submitted with Annual and Final Reports.	2. CITES reports produced by countries importing cycads from Uganda are presented annually and accurately to enable valid trade data analysis. Risk minimised by cross referencing details of import and export country reports.
3. Significantly reduced demand for wild sourced cycads	3a. Production of ~2,500 nursery seedling for all three species through local community nursery project in the villages of Ntarama and Karuhuguma. (Y2-3) 3b. 10% increment in natural population sizes in three sites through replanting of nursery-raised plantlets (Y3) 3c. 50% reduction in demand for wild sourced cycad material (seed, seedling) through sale of nursery-raised plants (Y3) 3d. Decline in international trade on Ugandan wild sourced cycads (Y3)	3.1. Project proposal on community nursery which includes establishment, appointment of staffs, training, maintenance of plants, replanting programme drafted by end of Y1. 3.2.Records of seed collection trips to the natural population as the source material for nursery 3.3.Records of seed germination and seedling establishment 3.4.Records of seedlings replanted in the natural population 3.5.Records of surplus seeds, seedlings, leaves and etc. sold to local communities and other interested parties (e.g. local municipalities) 3.6.Records of other plants co-planted and sold in the nursery as an incentive	1. Natural seed production is not too low for seed collection, thus hindering cultivation. Risk minimised by securing seed access from ex situ collections at enabling partners (SANBI, Nong Nooch Tropical Botanical Garden, Fairy Lake Botanical Garden). 2. Nursery plots not lost due to changes in land ownership. Risk minimised by identifying alternative site for back-up nursery.

		for local communities 3.7. Audit of nursery set up for functionality and security. 3.8.Records of international trade on Ugandan cycads provided by UNEP-WCMC	
4. Strengthened knowledge and capacity of Ugandan staff and the cycad community involved in conservation and sustainable use	4a. Two full time Ugandan scientist/horticultural staffs trained by end Y1. 4b. Project workshop in Uganda at the end of Y3 to share knowledge with the wider cycad community and to celebrate success of the project with local community and children. 4c. Cascade training by Ugandan scientist to Philippine scientists/ horticulturists (Y3), increasing local cycad conservation knowledge from 5 to 20 staff 4d. Value of Ugandan endemic cycad biodiversity in local and global conservation action communicated to wider cycad conservation community, local government, local communities, schools through scientific publications, talks, guidelines on best practise and cascade training. (Y2, 3)	4.1. Short-term scientific mission training reports in China, Thailand and the UK for Ugandan partners by end of Y1. 4.2. Training records (post-training assessment questionnaire) of staffs in pollen, seed storage biology, artificial pollination and seed germination; institutional record on the establishment of a basic seed storage facility at JERA. 4.3. Programme of the project workshop in Y3 to be submitted with the Final Report. 4.5. Reports on cascade training by Ugandan scientist to Philippine scientists/ horticulturists (Y3). 4.6. Information / technical leaflets produced for three species in two languages (English and Swahili) to be distributed, uploaded onto the web and submitted with the Final Report. 4.8. Journal volume, page numbers (and Open Access location) of two peer-reviewed papers. Copies of papers to be sent with the Final Report. 4.9.Value of Ugandan endemic cycad biodiversity in local and global conservation action communicated to wider communities, local government, local communities and schools through, talks, interviews, media, local workshop, school programme.	1. No insurmountable challenges in securing visas for JERA staff to train in other countries. Risk minimised through early applications for visas. 2. Essential, trained staffs leave the project. Risk minimised by training two scientists and followed by cascade training in Uganda.

5. Community cycad projects (plant nursery and schools programme) established in Uganda	5a. Number of local communities involved in cycad conservation project increased from two to four by end Y3 5b. Number of people to be directly employed to work part-time in the new nursery project increased from 0 to 40 (Y2, 3) 5c. Educational programme 'Cycads for Children' included in school activities to promote understanding of the value of cycad biodiversity and its conservation (Y2,3)	5.1. Surveys on pre-project awareness, cultural impact, commitment in two local communities/leaders in the villages of Ntarama and Karuhuguma, Rwenshama primary school in Kamwenge district and local authorities sent with Y1 Annual Report. 5.2. Signed agreement between local community leader, local authority and other parties involved for local community nursery project sent with 1st year Annual Report. 5.3.Record number of people directly employed to work in the nursery project 5.4.Community group annual record on activities sent with Annual Report 5.4.Educational materials and school programme schedule included in Final Report; and children's stories on cycads available on web	1. Communities remain committed to cycad conservation efforts. Risk minimised by carefully selecting the communities that JERA has previous experience of collaborating with.

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)

Activity 1.1 Establish agreement with local authorities for field study and seed/pollen collecting permission
Activity 1.2 Conduct field study to evaluate population size, distribution, phenology and meteorological data of E. equatorialis, E. macrostrobilus and E. whitelockii.
Activity 1.3 Undertake 'Elasticity Analysis' on the population data to simulate population trends
Activity 1.4 Undertake 'Elasticity Analysis' on the population data to simulate population trends
Activity 1.5 Write two peer-reviewed papers (on population trends of Ugandan cycads and another on cycad pollen and seed biology)
Activity 1.6 Write an e-compendium volume of Encephalartos biology and cultivation

Activity 2.1 Ugandan scientists trained by SANBI partner in micro-chipping cycads by end of Y1
Activity 2.2 Matured plants identified in the natural population for micro-chipping by middle of Y2
Activity 2.3 Identified matured plants micro-chipped by end of Y2
Activity 2.4 Submit project report (annually) to CITES and CBD focal points before their annual report is due
Activity 2.5 Training of Ugandan enforcement officers using the 'CITES and Cycads' training CD Rom.
Activity 2.6 Collate trade data for E. equatorialis, E. macrostrobilus and E. whitelockii to understand the demand and supply chain.

Activity 3.1 Conduct market survey at four local market towns (Fort portal, Ibanda, Kasese and Mbarara)
Activity 3.2 Suitable plot for nursery agreed between JERA and the local communities in the villages of Ntarama and Karuhuguma

Activity 3.3 Collect (and receive) seed and set up germination trial in the nursery
Activity 3.4 Seedlings replanted in the natural habitat in Y2 and monitored into Y3
Activity 3.5 Sell surplus seedlings from nursery to local community (mainly Y3)

Activity 4.1 Train two Ugandan scientist/horticulturalist through a short term scientific missions in NNTBG, FLBG and the UK for 6 weeks
Activity 4.2 In house (and cascade) training of other members of staff at JERA and (>50) students of Makerere University
Activity 4.3 Organise a project workshop in Uganda by end of Y3
Activity 4.4 Cascade training on cultivation of cycads to around 20 staffs of De La Salle University, Philippines as they develop an institutional botanic garden.
Activity 4.5 Ongoing training and progress meeting between JERA project manager and S. African partner (SANBI) once every 6 months**.**
Activity 4.6 Write and distribute information leaflets on at least three cycad species, in English and Swahili.
Activity 4.7 Present findings in scientific conference (Y2, 3), at final workshop (Y3) and public talks (Y1-3).

Activity 5.1 Consultation with two communities (villages of Ntarama and Karuhuguma), including primary school teachers, on awareness of conservation and sustainable use issues
Activity 5.2 Draft agreement between JERA and two local communities on rota for part-time work in nursery
Activity 5.3 Appoint local community nursery project manager to oversee activity and progress
Activity 5.4 Training of local people in cycad seed collection and cultivation
Activity 5.5 Develop and delivery of 'Cycads for Children' school programme

Annex 3 Standard Measures

None submitted with the original application, but estimated at the end of Y1

Table 1 Project Standard Output Measures

Code No.	Description	Gender of people	Nationality of people (if relevant)	Year 1 Total (target)	Year 2 Total	Year 3 Total	Total to date End Y1	Total planned during the project
Estab-lished codes								
4 A	General lectures on cycad biology / conservation		Undergraduates at Makere University, Uganda	0	50	50	0	Estimate = 100
6A	Cascade training to Philippine scientists		Ugandans KT to Philippines	NA	NA	15	NA	N = 15
6A	Specialist cycad cultivation training at partner institutes		Ugandan	2 new staff and 1 existing staff member	1 new staff	NA	1 new staff and 1 existing staff	N = 3
6B	2 people for 6 weeks each (linked to 6A immediately above)		Ugandan	6 person weeks	6 person weeks	NA	6 persons weeks	12 person weeks
6A	5 Enforcement Officers trained using 'CITES and Cycads' pack		Ugandan	0	0	5	0	5 persons
6A	70% children in target primary school educated about cycads (Cycads for Children)		Ugandan	NA			NA	About 400 children
9	Non-deterimental findings for three species		-	NA	NA	3	NA	3 reports
9	Information leaflets for three species		-	0	0	3	0	3 leaflets in two languages
10	e-compendium on cycad cultivation		-	NA	NA	1	NA	1
11A	PR journal papers		Many	NA	1	1	0	2
14A	Conference / final workshop		Many	0	0	1	0	1
14B	Conference papers presented			0	2	2	0	4
22	Nursery			Sites identified	2	0	0	2

23	Resources raised			**Confirmed** £118,446 [34% total project costs (tpc)] from the Royal Botanic Gardens, Kew towards project management, specialist training and associated overhead. £10,000 (3% tpc) from Mohamed Bin Zayed Species Conservation Fund (MBZSCF) to work with South Africa National Biodiversity Institute (SANBI) for conservation of critically endangered E. middelburgensis cycad. £27,000 (8% tpc) from The other enabling partners will contribute: De La Salle University (DLSU), Manila, Philippines (institutional and staff costs for local survey study and to host visiting scientists from Uganda); Fairy Lake Botanical Garden (FLBG), China (cultivation of a broad range of cycads from seeds) and Nong Nooch Tropical Botanical Garden (NNTBG), Thailand (access to the world's largest cycad pollen store, specialist expertise in pollen handling and cultivation of a broad range of cycads from seeds) and the World Conservation Monitoring Centre (WCMC) (trade data). **Unsecured** £7500 G-I-K from UK staff linked to business on other projects **Applied for in Sept 2014 (Y1)** £5000 from FCO Strategic Programme Fund - unsuccessful

Table 2 Publications

NA in Y1

Title	**Type** (e.g. journals, manual, CDs)	**Detail** (authors, year)	**Gender of Lead Author**	**Nationality of Lead Author**	**Publishers** (name, city)	**Available from** (e.g.website link or publisher)

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

This may include outputs of the project, but need not necessarily include all project documentation. For example, the abstract of a conference would be adequate, as would be a summary of a thesis rather than the full document. If we feel that reviewing the full document would be useful, we will contact you again to ask for it to be submitted.

It is important, however, that you include enough evidence of project achievement to allow reassurance that the project is continuing to work towards its objectives. Evidence can be provided in many formats (photos, copies of presentations/press releases/press cuttings, publications, minutes of meetings, reports, questionnaires, reports etc.) and you should ensure you include some of these materials to support the annual report text.

Checklist for submission

	Check
Is the report less than 10MB? If so, please email to Darwin-Projects@ltsi.co.uk putting the project number in the Subject line.	✓
Is your report more than 10MB? If so, please discuss with Darwin-Projects@ltsi.co.uk about the best way to deliver the report, putting the project number in the Subject line.	No
Have you included means of verification? You need not submit every project document, but the main outputs and a selection of the others would strengthen the report.	✓
Do you have hard copies of material you want to submit with the report? If so, please make this clear in the covering email and ensure all material is marked with the project number.	No
Have you involved your partners in preparation of the report and named the main contributors	Have tried to but fieldwork has intervened
Have you completed the Project Expenditure table fully?	✓
Do not include claim forms or other communications with this report.	