



Submit by Tuesday 1 December 2015

DARWIN INITIATIVE APPLICATION FOR GRANT FOR ROUND 22: STAGE 2

Please read the Guidance Notes before completing this form. Where no word limits are given, the size of the box is a guide to the amount of information required.

Information to be extracted to the database is highlighted blue. Blank cells may render your application ineligible

ELIGIBILITY**1. Name and address of organisation**

(NB: Notification of results will be by email to the Project Leader in Question 6)

Applicant Organisation Name:	International Plant Genetic Resources Institute (operating as Bioversity International)
Address:	Via dei 3 Denari, 472/a,
City and Postcode:	Maccarese, Rome 00154
Country:	Italy
Email:	
Phone:	

2. Stage 1 reference and Project title

Stage 1 Ref: 3354	(max 10 words) Upgrading and broadening the new South-Pacific International Coconut Genebank
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3. Project description (not exceeding 50 words)

(max 50 words)

Papua New Guinea's International Coconut Genebank is jeopardised by a lethal disease. Meanwhile, yet-to-be identified Pacific region coconut biodiversity is threatened by climate change. Supporting the planned transfer of the genebank to new and secure sites in PNG, Fiji and Samoa will safeguard existing and newly sourced accessions.

4. Country(ies)

Which eligible host country(ies) will your project be working in? You may copy and paste this table if you need to provide details of more than four countries.

Country 1: PAPUA NEW GUINEA (PNG)	Country 2: FIJI
Country 3: SAMOA	Country 4:

5. Project dates, and budget summary

Start date: 1 June 2016	End date: 31 May 2019	Duration: 3 years		
Darwin request	2016/17 £93,028	2017/18 £146,419	2018/19 £78,437	Total request £317,884
Proposed (confirmed & unconfirmed) matched funding as % of total Project cost				42%
Are you applying for DFID or Defra funding? (Note you cannot apply for both)		DEFRA		

6. Partners in project. Please provide details of the partners in this project and provide a CV for the individuals listed. You may copy and paste this table if necessary.

Details	Project Leader	Project Partner 1	Project Partner 2
Surname	PRADES	TUIA	MACANAWAI
Forename (s)	Alexia	Valerie Saena	Apaitia
Post held	Scientist and COGENT Coordinator	Coordinator – Genetic Resources/ Centre for Pacific Crops and Trees/Pacific Plant Genetic Resources Network (PAPGREN),	Acting Director
Organisation (if different to above)	Bioversity International / Coconut genetic resources network (COGENT) / Centre Internationale pour la recherche agronomique pour le développement (CIR AD)	Pacific Community (SPC), FIJI	Ministry of Agriculture, FIJI
Department	Effective Genetic Resources Conservation and Use (Bioversity) / UMR Qualisud (CIRAD)	Land Resources Division	Crop research Division
Telephone			
Email			

Details	Project Partner 3	Project Partner 4	Project Partner 5
Surname	KONELIO MISA	AKU	NAIR, S.
Forename (s)	Misa	Alan	Deepthi
Post held	Assistant Chief Executive Officer	Industry Affairs Manager	Assistant Technical Director
Organisation (if different to above)	Ministry of Agriculture, SAMOA	Kokonas Industri Koporesen (KIK) (ex Indonesia Copra Marketing Board) Part of PNG GOVERNMENT	Asian and Pacific Coconut Community (APCC), Jakarta, INDONESIA
Department	Crops division		
Telephone			
Email			

Details	Project Partner 6	Project Partner 7	Project Partner 8
Surname	BRAMEL	BAUDOUIN	
Forename (s)	Paula	Luc	
Post held	Deputy Executive Director	Researcher (genetics and plant breeding)	
Organisation (if different to above)	Global Crop Diversity Trust (GCDT)	Centre Internationale pour la recherche agronomique pour le développement (CIRAD)	
Department	n/a	Département de systèmes biologiques (BIOS) UMR Amélioration Génétique et Adaptation des Plantes méditerranéennes et tropicales (AGAP)	
Telephone			
Email			

7. Has your organisation been awarded a Darwin Initiative award before (for the purposes of this question, being a partner does not count)? **If so, please provide details of the most recent awards (up to 6 examples).**

Reference No	Project Leader	Title
22-017	Dr Michael Halewood	Mutually supportive implementation of the Nagoya Protocol and Plant Treaty

8a. If you answered 'NO' to Question 7 please complete Question 8a, b and c.

If you answered 'YES', please go to Question 9 (and delete the boxes for Q8a, 8b and 8c)

9. Please list all the partners involved (including the Lead Institution) and explain their roles and responsibilities in the project. Describe the extent of their involvement at all stages, including project development. This section should illustrate the capacity of partners to be involved in the project. Please provide written evidence of partnerships. Please copy/delete boxes for more or fewer partnerships.

<p>Lead institution and website:</p> <p>Bioversity International / COGENT</p> <p>www.bioversityinternational.org</p> <p>www.cogentnetwork.org</p>	<p>Details (including roles and responsibilities and capacity to lead the project): (max 200 words)</p> <p>Bioversity has hosted and coordinated COGENT since 1992, promoting collaboration to effectively conserve and use coconut genetic resources. COGENT currently has 39 country members (representing ~98% global production).</p> <p>COGENT also:</p> <ul style="list-style-type: none"> • Identifies and secures additional threatened coconut diversity • Establishes and maintains an international database on coconut collections; • Encourages protecting and using existing germplasm collections; • Promotes greater collaboration among research groups in producer countries in exchanging germplasm and developing new techniques • Conducts training disseminates information dissemination and helps secure funding. <p>COGENT, in collaboration with CIRAD, helped in establishing the PNG International Coconut Genebank (ICG) and, in 2007, putting the collection in the multilateral system of access and benefit-sharing under the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA). Since then, the PNG Government has held in trust the coconut collections at the Stuart Research Station, in Madang. COGENT has helped in building Station staff capacity, and manages a database storing the collection's information.</p> <p>Bioversity/COGENT will lead the project, providing its scientific expertise and mobilizing COGENT-linked scientists and other relevant stakeholders. It will coordinate project activities and ensure achievement of project outcomes and outputs..</p>
Have you included a Letter of Support from this institution?	Yes

<p>Partner Name and website where available:</p> <p>The Pacific Community (SPC)</p> <p>Until 1st November 2015, SPC was an acronym for <i>the Pacific Community</i>, but since then it is known as the Pacific Community, but retaining the acronym SPC</p> <p>www.spc.int http://www.spc.int/rd/the-pacific-plant-genetic-resources-network-papgren</p>	<p>Details (including roles and responsibilities and capacity to engage with the project): (max 200 words)</p> <p>The Pacific Community (SPC) is an international development organisation with 26 member-countries. It aims to sustainably strengthen the wellbeing of Pacific people through innovative application of science and knowledge, including enhancing regional food and nutritional security. It has established the Centre for Pacific Crops and Trees (CePaCT), and the Pacific Agricultural Plant Genetic Resources Network (PAPGREN). PAPGREN developed a Pacific Agricultural PGR Action Plan, and Bioversity International has provided technical support throughout implementation. PAPGREN membership embraces 22 countries including the three proposed target countries. PAPGREN promotes conserving and using genetic resources of locally important crops to ensure their long-term availability for the region.</p> <p>SPC/PAPGREN will spearhead identifying endangered Pacific areas (linked to previous GIS and climate studies) and coordinate collection missions for coconut cultivar accessions in Fiji and Samoa, in collaboration with respective governments. SPC will also co-supervise students and contribute to building capacity of the new genebank's staff.</p> <p>An SPC staff-member will be part of the project Steering Committee. As the regional ITPGRFA focal point, SPC will also facilitate, in collaboration with COGENT and APCC, drafting updated and new MOAs between ITPGRFA, Bioversity International/COGENT and the Governments of Fiji, Samoa and PNG to formalise the multi-site Pacific ICG.</p>
<p>Have you included a Letter of Support from this institution?</p>	<p>Yes</p>

<p>Partner Name and website where available:</p> <p>Government of Fiji, Ministry of Agriculture</p> <p>http://www.agriculture.gov.fj/</p>	<p>Details (including roles and responsibilities and capacity to engage with the project): (max 200 words)</p> <p>The Fijian Ministry of Agriculture envisions a vibrant and sustainable agriculture equitably boosting Fijian's wealth and food security along with increased contribution to GDP. It will achieve this through effective provision of customer-focused and market driven services in the agriculture sector, and supporting the more upstream research and extension services needed to successfully implement its Strategy.</p> <p>After signing the Convention on Biological Diversity (CBD), the Government developed its required <i>Biodiversity Strategy and Action Plan (BSAP)</i>. Work-package 5 partly aims to establish a crop germplasm collection as reference material. This will identify and describe the diversity and morphology of selected crop cultivars, including coconut, and develop cultivar descriptors, documented in a database and herbarium...</p> <p>The SPC has complementary GR conservation, cryopreservation, micropropagation distribution and quarantine expertise linking to the Ministry's proposed work in preparing the already identified site for the proposed back-up collection of regionally important coconut germplasm. Fiji is an active COGENT member, with a track-record of fruitful interactions (see http://www.cogentnetwork.org/factsheets/pacific/fiji) The government may also use the established Taveuni germplasm collection</p> <p>The Ministry will also facilitate the SPC in organizing collecting missions to source new cultivars. and the safe exchange of coconut germplasm through the appropriate standard material transfer arrangements.</p>
Have you included a Letter of Support from this institution?	Yes

<p>Partner Name and website where available:</p> <p>Government of Samoa, Ministry of Agriculture and Fisheries</p> <p>http://www.maf.gov.ws/</p>	<p>Details (including roles and responsibilities and capacity to engage with the project): (max 200 words)</p> <p>Samoa's Ministry of Agriculture and Fisheries envisions self-sufficiency in food and increased income generation in farming leading to improved food security and commercial development through sustainable agricultural production. Stronger focus on coconut production should help achieve these goals. Coconut is the most predominant Samoan crop, providing an important source of food and cash. The coconut germplasm conservation site containing 11 local coconut varieties at Olomanu will be augmented at the new Nuumaf site.</p> <p>Theme 7 of Samoa's <i>Biodiversity Strategy and Action Plan</i> on agrobiodiversity strategically aims to conserve and sustainably use agrobiodiversity contributing to national development and preserving traditional knowledge and practices. Objective 1 aims at effective conservation and sustainable use of agrobiodiversity, through promoting methodologies for sustainable use of agrobiodiversity. Part of the work is implemented through MAF's coconut breeding program, which links to the proposed work.</p> <p>Linked to the coconut breeding programme, MAF will prepare an associated site for the proposed back-up collection of regionally important coconut germplasm.</p> <p>The Ministry will also facilitate organizing the collecting missions to source new cultivars within Samoa and safe exchange of coconut germplasm through the appropriate standard material transfer arrangements.</p>
Have you included a Letter of Support from this institution?	Yes

<p>Partner Name and website where available:</p> <p>Government of Papua New Guinea, as Kokonas Industri Koporesen (KIK- the Coconut Industry Corporation)</p> <p>http://www.agriculture.org.pg/</p>	<p>Details (including roles and responsibilities and capacity to engage with the project): (max 200 words)</p> <p>Tree/industrial crops, including coconut produce ~ 92% agricultural exports, engaging most of the rural labour force. The Department of Agriculture and Livestock (DAL) aims to enable increases in agricultural production, boosting wellbeing and development.</p> <p>According to PNG's <i>Biodiversity Strategy and Action Plan (BSAP)</i>, crop genetic diversity, is maintained by specific R&D bodies in PNG. Coconut research is partly conducted by the Stewart Research Station (of KIK), which hosts the International Coconut Genebank for the South Pacific (ICG-SP), including unique germplasm, now threatened by a new lethal bacterial disease, and will be relocated to a safe site, with safety back-ups in Fiji and Samoa. The new sites will include new accessions to fill gaps in conserved diversity. KIK presented the ICG transfer-project (2016-2019) to the Government in 2015, which includes: establishing the genebank office; recruiting and training staff; establishing a coconut nursery; constructing a pollen laboratory; planting inter-crops to sustain genebank management; evaluating cultivars; and establishing a resource centre and research and training.</p> <p>The Darwin Initiative-supported work will complement the above work, and KIK be a member of the Steering Committee, conduct collecting missions in PNG, organizing training staff from the three new Pacific genebanks and hosting the final project meeting.</p>
Have you included a Letter of Support from this institution?	Yes

<p>Partner Name and website where available:</p> <p>The Centre Internationale pour la recherche agronomique pour le développement (CIRAD) www.cirad.fr</p>	<p>Details (including roles and responsibilities and capacity to engage with the project): (max 200 words)</p> <p>CIRAD has collaborated with COGENT since its formation in 1992. Since 2012, CIRAD has co-coordinated the international network, in collaboration with Bioversity International.</p> <p>CIRAD scientists focus on coconut breeding and genomics, genetic resources characterization, evaluation and data management, phytopathology, agronomy, and valorisation. They developed the coconut genetic resources database for COGENT and trained staff coconut genebank-staff to use the software.</p> <p>CIRAD also developed a set of coconut microsatellite genetic markers. Resulting genotypic data are stored in CIRAD's TropGENE database. They also collaboratively developed widely-used genetic software GeneClass 2, to assign individuals to populations.</p> <p>In April 2015, CIRAD participated in a workshop organized by the Global Crop Diversity Trust (GCDT), COGENT, and the Pacific Community (SPC) and funded by the Australian centre for international agricultural research (ACIAR) in PNG to prepare for transfer of the ICG-SP.</p> <p>CIRAD will contribute its coconut expertise as a part of the International team of Experts (ITEx) for project implementation. This will include contributing to technical capacity building for identifying, characterizing and recording data for new accessions to be collected. They will also be involved in training the new genebanks' staff and co-supervision of associated students.</p>
Have you included a Letter of Support from this institution?	Yes

<p>Partner Name and website where available:</p> <p>the Asian and Pacific Coconut Community (APCC)</p> <p>www.apccsec.org</p>	<p>Details (including roles and responsibilities and capacity to engage with the project): (max 200 words)</p> <p>The Asian and Pacific Coconut Community (APCC) is an intergovernmental organization organized under the United Nations Economic and Social Commission for Asia and the Pacific (UN-ESCAP). Its 18 coconut-producing member-countries produce over 90% world coconut production and exports. APCC envisions improving socio-economic conditions of all coconut stakeholders in member countries, particularly for smallholders. APCC promotes, coordinates and harmonizes coconut industry activities which sustain coconut-linked livelihoods. APCC's mission is to assist member countries to develop their coconut industries to: increase productivity; reduce production costs; adopt integrated, coconut-based farming systems; encourage organic production; promote farm-level processing; promote product diversification/ value addition and by-product utilization; improve quality standards; intensify market and research activities; harmonize trade-related issues and; develop human resources for effective transfer of technology.</p> <p>APCC will be a project steering committee key member and collaborate in drafting MoAs between FAO/ITPGFRA, Bioversity International/COGENT and APCC member-Governments of Fiji, Samoa and PNG to ratify the multi-site international collection in the Pacific. APCC will support policy-making elements and assist COGENT in collaboratively exchanging expertise, information and technologies as well as building the International Team of Experts (ITEx) in collaboration with the scientists and researchers across the APCC member-countries in the Asia-Pacific region.</p>
Have you included a Letter of Support from this institution?	Yes

<p>Partner Name and website where available:</p> <p>The Global Crop Diversity Trust (GCDT)</p> <p>www.croptrust.org</p>	<p>Details (including roles and responsibilities and capacity to engage with the project): (max 200 words)</p> <p>The Global Crop Diversity Trust (GCDT) works to safeguard crop diversity, forever, and funds the world's most important genebanks. They maintain a back-up seed collection in the Svalbard Global Seed Vault. They pursue conservation and use of wild relatives and develop a new generation of information technologies to make the world's crop diversity searchable and accessible wherever it is needed.</p> <p>A GCDT representative will be a project Steering Committee member. The GCDT will also help guide the project regarding the establishment of new memoranda of understanding (MoAs) for genebank establishment and management for the Fiji and Samoa sites, and update the existing MoA for PNG. As GCDT is centrally involved in security and availability of germplasm collections, the SC will draw on its expertise in this regard. These MoA would relate to long term commitment from the institutes in term of quality and security of conservation as well as commitment to making material available for use.</p> <p>The GCDT will also help elaborate the "governance architecture" within the three genebank sites, and to establish key rules so that the three sites agree on a "memorandum of understanding".</p>
Have you included a Letter of Support from this institution?	Yes

10. Key Project personnel

Please identify the key project personnel on this project, their role and what % of their time they will be working on the project. Please provide 1 page CVs for these staff, or a 1 page job description or Terms of Reference for roles yet to be filled. Please include more rows where necessary.

Please note: because of the multidisciplinary nature of this work we have secured the commitment of other specialists who will be dedicating small amounts of their professional time, and are not therefore considered key personnel, although we will be including their CVs. Also as the project steering committee members will give around 5 % time we have clustered them. Bioversity staff are providing essential skills in legal, biodiversity and data management them they are also clustered.

Name (First name, surname)	Role	Organisation	% time on project	1 page CV or job description attached?
Dr Alexia PRADES	Project Leader/ COGENT coordinator	Bioversity International/ COGENT/ CIRAD	30	Yes
Dr Valerie S. TUIA	Steering Committee (SC) member, coordination in Fiji and Samoa, ITPGRFA representative; coordinating Fiji/PNG technical contributions in germplasm conservation, collecting mission and local GIS work	The Pacific Community (SPC); the Centre for Pacific Crops and Trees (CePaCT), and the Pacific Agricultural Plant Genetic Resources Network (PAPGREN)	5	Yes
Dr Luc BAUDOIN	Steering Committee, technical advisor; geneticist; coordinating CIRAD's technical contribution in genetics, GIS, and ethnobotany	Centre Internationale pour la recherche agronomique pour le développement (CIRAD)	10	Yes
Dr Geo COPPENS	GIS /mapping specialist		20	Yes
Isabel Lopez NORIEGA	legal issues	Bioversity International	5	Yes
Dr Julie SARDOS	diversity evaluation		2	Yes
Dr Max RUAS	Data management		5	Yes
To be determined	local biodiversity liaison for collecting missions	Local organization (one per country)	TBD	TOR
Dr Paula BRAMEL	SC members: ICG management genebanks, link with the Treaty and legal aspects	GCDT	5	Yes
NAIR, S. , Deepthi ,		APCC	10	Yes
Dr Apaitia MACANAWAI		Ministry of Ag, Fiji	5	Yes
Mr Misa KONELIO		Ministry of Agriculture and Fisheries, Samoa	5	Yes
Mr Alan AKU		Kokonasi Industri Koporesen (KIK) PNG Government	5	Yes

11. Problem the project is trying to address

Please describe the problem your project is trying to address in terms of biodiversity and (essential for DFID projects) its relationship with poverty. For example, what are the drivers of loss of biodiversity that the project will attempt to address? Why are they relevant, for whom? How did you identify these problems?

If your project is working on an area of biodiversity or biodiversity-development linkages that has had limited attention (both in the Darwin Initiative portfolio and in conservation in general) please give details.

(Max 300 words)

Coconut and its genetic diversity provide significant nutrition (vitamins, minerals, fibre, energy) and multi-million dollar income for more than 8 million Asia-Pacific households, (>4 million females), yet there is scant support for conserving its endangered genetic resources. In many Pacific islands, diversity is seriously threatened by climate change, potential sea-level rise and soil salinization, as well as other challenges such as pests and diseases. Not all representative coconut diversity is adequately conserved by COGENT Network in the International Coconut Genebank-South Pacific (ICG-SP) in Papua New Guinea (PNG).

Moreover, the existing PNG genebank is currently threatened by a lethal disease (<http://www.cogentnetwork.org/bogia-syndrome-disease>). It will be transferred to a safe site in PNG (following a national plan written in June 2015), with a duplication back-up planned in Fiji and Samoa.

The proposed Darwin Initiative will complement this transfer with collecting missions in the three countries and building capacity for the three new Pacific genebanks. For the new ICG-SP sites, international and local experts will help identify those cultivars most threatened by habitat loss during the next 40 years. Most-endangered areas will be explored for collecting and conserving threatened new coconut germplasm. These will be characterised taking in account local uses, resistance to cyclones and diseases along with gender-disaggregated trait preferences.

This project will also help in training young scientists in coconut breeding and GR conservation. All data will be accessible in the Coconut Genetic Resource Database (CGRD). The selected cultivars will then be safely moved to PNG, Fijian or Samoan sites. *The new multi-site ICG for the Pacific will be placed under the ITPGRFA to benefit the global community.*

COGENT's soon-to-be-published *Global Strategy for Conservation and Use of Coconut Genetic Resources* highlights the need to conserve Asia-Pacific diversity, following extensive feedback from country-members, and coconut industry stakeholders.

12. Biodiversity Conventions, Treaties and Agreements

Which of the conventions supported by the Darwin Initiative will your project support? Note: projects supporting more than one convention will not achieve a higher scoring

Convention On Biological Diversity (CBD)	Yes/No
Nagoya Protocol on Access and Benefit Sharing (ABS)	Yes/No
International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)	Yes/No
Convention on International Trade in Endangered Species (CITES)	Yes/No

12b. Biodiversity Conventions

Please detail how your project will contribute to the objectives of the convention(s), treaties and agreements your project is targeting. You may wish to refer to Articles or Programmes of Work here. Note: No additional significance will be ascribed for projects that report contributions to more than one convention

(Max 200 words)

Ensuring long-term coconut genetic diversity conservation contributes to **CBD** objective 1: (*Biological diversity conservation*), especially implementing the CBD Agricultural Biodiversity programme and achieving Aichi Biodiversity target 13¹.

Making more and safer coconut genetic diversity available through the multilateral system (MLS) contributes to **ITPGRFA** objectives. The ICG-SP is part of the MLS via agreements between ITPGRFA's Governing Body, Bioversity and PNG, whereby coconut stakeholders can better access genebank germplasm. Funds from their use partly flow back to the conservation community, including farmers. The project also contributes to ITPGRFA articles 5 (conservation) and 6 (sustainable use).

Fiji and Samoa participate in the **Nagoya Protocol** (NP). Access to new coconut germplasm in the ICG-SP will be subject to NP provisions. Project partners aim to include this material in the MLS, simultaneously ensuring that original providers' interests and rights are addressed. This offers opportunities to support Samoan and Fijian organizations to implement the NP in line with the ITPGRFA.

12c. Is any liaison proposed with the CBD/ABS/ITPGRFA/CITES focal point in the host country?

Yes No if yes, please give details:

The project has already engaged with ITPGRFA focal points who are members of the project steering committee. We have informed the CBD focal points for all three target countries, and invited them to support the proposed work as they see fit. We have shared the proposal with them and invited comments.

13. Methodology

Describe the methods and approach you will use to achieve your intended outcomes and impact. Provide information on how you will undertake the work (materials and methods) and how you will manage the work (roles and responsibilities, project management tools etc.).

(Max 500 words – this may be a repeat from Stage 1, but you may update or refine as necessary. Tracked changes are **not** required.)

Project management:

- The project will be managed by COGENT's coordinator, supported by an accountable steering committee (SC) composed of one representative of COGENT, SPC, APCC, GCDT, and governments of Fiji, PNG and Samoa. SC-members liaise with M&E to manage risks and changes.
- A project kick-off meeting with partners, back-to-back to a first SC meeting will:
 - formalise the SC
 - develop ToRs and LOAs for two equitably-balanced International Teams of Experts (ITEx)
 - review the project impact pathway, workplan, monitoring plan, budget, and capacity building, gender, communications and data and knowledge management elements.
- Regular virtual and annual SC meetings will track project progress, review and adjust implementation
- Country monitoring representatives will implement the project M&E plan
- The project will be officially presented at the 7th ITPGRFA Governing Body Session
- A final meeting in PNG will launch the new ICG-SP (sign MOAs and MOU) and consensually draft a workplan for future collecting missions.

The project will have **two parts working in parallel**. The first (mapping) will last approximately one year. Its outputs will help to implement the second part (targeting and collecting accessions). activities will be in conjunction with training genebank staff and young scientists.

¹ By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity)

Mapping and forecasting endangered diversity (2 MSc trained)

- Review current status of climate-change threats and GIS in target countries, search for climate-change and sea-level rise forecasts for the next 40 years, and search for coconut palm plantings mapping.
- Using GIS and modelling technology and other primary (surveys) and secondary (government and other statistics) data, update or create maps of coconut cultivation areas, in target countries, including where they are or will be jeopardised by climate change
- Develop (or modify) database(s) and COGENT website (linking to SPC and [Genesys](#)) to make maps widely available

Targeting and Collecting accessions for the ICG-SP. Two ITEX will oversee these activities (1 PhD student to be further employed by ICG, 4 Masters trained and ICG staff trained).

- Build a protocol for identifying, characterizing, collecting and transporting new accessions, based on COGENT's standard descriptor list, scientific surveys, bibliography, social surveys on local traditions, and cultural importance of coconut varieties
- Make a list of current and potentially interesting cultivars for the international collection
- Hold workshops (combined with SC Meetings) to communicate, discuss and endorse mapping results, and guidelines, finalize the list of cultivars and design a germplasm collection plan
- Begin to prepare the 3 genebank sites or quarantine areas for the newly collected accessions (nurseries and sanitary issues), in conjunction with the relevant government ministries. This will include drafting MOAs and MOU between relevant parties, and training for and drafting SMTAs for subsequent use.
- Define protocols and model agreements to guide collecting missions in farmers' fields, and terms and conditions to guide subsequent uses of the collected germplasm.
- Conduct different collecting missions by mixed teams of 'juniors'/'experts' (mentoring) to identify endangered cultivars. Whenever possible, teams will collect seednuts, respecting international germplasm exchange safety regulations, and plant the selected cultivars in nurseries
- Prepare and record accessions in COGENT's database, via mobile data devices.

14. Change Expected

Detail the expected changes this work will deliver. You should identify what will change and who will benefit a) in the short-term and b) in the long-term.

- If you are applying for Defra funding this should specifically focus on the changes expected for biodiversity conservation and its sustainable use.
- If you are applying for DFID funding you should in addition refer to how the project will contribute to reducing poverty. Q15 provides more space for elaboration on this.

(Max 300 words)

- 1) More exhaustive **knowledge of Pacific regional coconut ex and in situ diversity** will benefit coconut stakeholders, including growers, breeders, genebank curators and regional governments. A **more comprehensive preliminary list of cultivars** will be released, to be regularly updated. New material will be identified, registered in the CGRD database, and available for new breeding and hybridisation programmes via SMTAs.
- 2) The **most-endangered coconut zones** in the region will be identified, mapped, prospected and monitored for valuable and threatened coconut diversity collaborating with regional biodiversity management and protection agencies.
- 3) **Three new ex situ genebanks** will be designed and a **methodology established to create a list of candidate cultivars** for conservation in the genebanks. This methodology will be adaptable for use in any country or region, thus proving a useful tool for COGENT country members to establish more comprehensive national and regional genepools in other (I)CGs.
- 4) There will be a **change in ICG management** by COGENT country members, where for the first time 3 different countries will manage one common genepool in 3 different places. A flexible agreement will be established to manage these sites and this genepool, based on a clear and transparent process.
- 5) **Young scientists will be trained to identify and characterise coconut cultivars.** New curators will be trained in coconut genebank management. Conserving and enquiring about traditional coconut varieties may change the mind-set of people in the Pacific, reviving old traditions and knowledge linked to the coconut palm.
- 6) **Coconut producers including smallholders will have access to a wider range of varieties**, and the Pacific coconut economic sector will be more resilient to climatic changes or other threats.
- 7) As a result of safeguarded coconuts, millions of coconut smallholders will **benefit from their sustainable use for enhanced coconut income and nutrition** (through sales, food etc.)

15. Pathway to poverty alleviation – ESSENTIAL FOR DFID PROJECTS, OPTIONAL FOR DEFRA PROJECTS

Please describe how your project will benefit poor people living in low-income countries. Give details of who will benefit and the number of beneficiaries expected to be impacted by your project. The number of communities is insufficient detail – number of households should be the largest unit used. If possible, indicate the number of women who will be impacted.

(Max 300 words)

Project outcomes will benefit more than 8 million Asia-Pacific coconut-dependent stakeholders in the longer term. Grown on over 12 million hectares, coconut is a culturally and economically important livelihood crop for scores of millions across the world. When fully developed and strategically used, coconuts increase food production, improve nutrition, create employment opportunities, enhance equity and help conserve the environment. Coconut is a very important source of diverse and high-value products such as oil, coconut water, sugar, and fibres (for non-soil growing media or geotextile). Coconut is one of the most useful in the plant kingdom yet one of the least studied and supported by research and the international community. As an important health food, coconut provides a significant source of vitamins, minerals, fibre and energy. Its proportionate role as cash-crop versus domestic consumption varies widely, but globally around 52% is exported as copra oil, with the domestic crop having important implications to improve women's equity and child nutrition

The future of global coconut production and livelihoods critically depends on the availability of genetic diversity and the sustainable use of this broad genetic base to breed improved varieties. Harnessing and conserving agrobiodiversity are critical to sustainably boosting productivity and livelihoods, and addressing important challenges including those posed by climate change or pest and disease epidemics. Today, more than 12 million people rely directly on coconut production, and hundreds of millions more are each growing a few coconut palms in their home gardens.

16. Exit strategy

State whether or not the project will reach a stable and sustainable end point. If the project is not discrete, but is part of a progressive approach, give details of the exit strategy and show how relevant activities will be continued to secure the benefits from the project. Where individuals receive advanced training, for example, what will happen should that individual leave?

(Max 200 words)

This project complements the transfer of the ICG-SP within PNG to be led by KIK (2016 to 2020). Although infrastructural additions such as genebank buildings, equipment, software and so forth are not part of the Darwin-funded project, they will be essential for the functioning of the genebanks. For the exit strategy, the participating governments have already indicated commitments (to be formalized via MoAs) to provide the necessary infrastructure, supported by COGENT and the SPC.

All the elements of an effective coconut germplasm management plan for the Asia-Pacific will be in place, including germplasm identification, capacity building, and guidelines for genebank management. To secure staff engagement in isolated sites, strong incentives will be offered.

This project is part of a long system built in order to preserve coconut biodiversity in perpetuity, based on a series of overlapping conservation projects. Although failure is always possible in such a complex work, the exit Strategy of the project will partly rely on its "multi-site" aspect. Were one of the partners obliged to leave the project, then the other sites will be able to do the job. This is the strength of a multi-site structure and of networks like PAPGREN or COGENT.

17a. Harmonisation

Is this a new initiative or a development of existing work (funded through any source)? Please give details (Max 200 words)

This is a new initiative complementing a related genebank-transfer project and contributing to finalising COGENT's new coconut genetic resources conservation strategy. The previous Strategy was based on 5 international ex-situ genebanks in 5 regions of the world (Latin America and Caribbean; Africa and Indian Ocean; South Asia and Middle East; South East Asia, and South Pacific). The new Strategy will more flexibly respond to changing global environment. The Pacific and especially its islands and coastal areas are threatened by climate change and demographic pressure as the population grows, with finite land resources. So COGENT's Pacific strategy is to develop a multilocation genebank, with its core of the majority of the accessions in PNG, and two safety back-up sites in Fiji and Samoa. Another element of the Strategy is not presented in this project: it will be to work on a system of in-situ conservation to preserve the very rare and unique accessions in their natural environment if it is impossible to move them safely to a genebank.

The idea of a multi-site, global virtual genebank is a relatively new approach to genetic resources conservation. The proposed Darwin initiative-funded work will significantly contribute to developing this multi-location genebank and protecting previously un-conserved diversity.

17b. Are you aware of any other individuals/organisations/projects carrying out or applying for funding for similar work? Yes/No

If yes, please give details explaining similarities and differences explaining how your work will be additional to tis work and what attempts have been/will be made to co-operate with and learn lessons from such work for mutual benefits.

Apart from the PNG-linked genebank transfer work, we are not aware of other similar funding bids for this work. CIRAD, ACIAR and Australian researchers have been involved in etiological studies to better understand the nature of the phytoplasma threatening the coconut genebank. Bioversity International hosts two other genetic resources networks, **CacaoNet** and **MusaNet**, for cacao and bananas respectively. These have also developed new genetics resources strategies, and there are many parallels which create potential for synergies and learning. Conserving and harnessing the diversity held within each genus presents a number of common and some specific challenges, and a synthesis could prove relevant as a set of case-studies to enrich/ inform such Strategies for other crop species. The work will also provide a strong basis for rationalising the other 4 ICG germplasm collections.

The project will integrate learning from novel work on banana gendered trait-preferences (Bioversity 2015) and a survey on indigenous knowledge of coconut reproductive biology (Bourdeix 2015).

18. Ethics

Outline your approach to meeting the Darwin Initiative's key principles for research ethics as outlined in the guidance notes.

(Max 300 words)

This proposal enshrines Darwin Initiative's key principles for research ethics, promoting equitable benefits-sharing within the target countries, and providing strong leadership from a multi-national, multi-stakeholder project steering committee (SC), co-chaired by the National Focal Points for the ITPGRFA. They will ensure adherence to existing ethical standards. The project will comply with CGIAR Guiding Principles for Management of intellectual assets especially to article 3 (promoting farmers' rights)². Strong leadership and participation by the developing-country partners are demonstrated in the support letters.

In striving to protect indigenous knowledge, along with locally-sourced germplasm, Bioversity has pioneered mutual recognition of traditional and scientific knowledge, respecting knowledge-stewards' rights and the ownership of local populations and landraces.

Project stakeholders will understand project goals, their roles, and how project outputs will be shared, as well as their rights to participate (or not), and only under fully acceptable conditions. The project will develop capacity and mechanisms to ensure that all access seekers comply with ethical standards for prior informed consent and mutual agreement of terms.

The steering committee will ensure the project contributes to objectives of both ITPGRFA and the Nagoya Protocol, and that their respective terms and conditions are approached in a mutually supportive manner when translating them into workable actions. Nagoya Protocol's requirements for access to coconut diversity traditional knowledge will receive particular attention.

The project will ensure that the international teams of experts (ITEx) will be equitably balanced (e.g. gender, public/private sector participation, and civil society). It will manage any conflict of interests arising among participants. It will work closely with the agricultural extension services and local associations during the collecting missions after securing adequate approval of the national authorities.

Bioversity's Dr Michael Halewood, trained in 'Human Research Ethics' will advise the project where necessary.

19. Raising awareness of the potential worth of biodiversity

If your project contains an element of communications, knowledge sharing and/or dissemination please provide a description of your intended audience, how you intend to engage them, what the expected products/materials there will be and what you expect to achieve as a result. For example, are you expecting to directly influence policy in your host

² See

http://www.cgiarfund.org/sites/cgiarfund.org/files/Documents/PDF/cgiar_principles_management_intellectual_assets_7march_2012.pdf) and related Implementation Guidelines (http://library.cgiar.org/bitstream/handle/10947/2846/Implementation_Guidelines_-_For_the_CGIAR_IA_Principles_on_the_Management_of_Intellectual_Assets.pdf?sequence=1).

country or is your project a community advocacy project to support better management of biodiversity?

(Max 300 words)

This project will expand coconut biodiversity knowledge for the coconut international scientific community. The results of the first ITEX **most-endangered cultivars listing** will be published on both project and COGENT websites, as well as in peer-reviewed journals. Some of these cultivars will be identified and characterized, and **data** stored in the Coconut Genetic Resources **Database** (CGRD), freely downloadable from the COGENT website. This will generate a more comprehensive knowledge bank of Asia-Pacific coconut diversity.

Coconut diversity and production maps will help governments and scientists to better predict impacts of future climate change on the regional/ national coconut ecosystems. The **new methodology to predict the evolution of coconut production areas** due to future climate change will help rationalize the 5 COGENT ICGs. It also will assist in strategic planning for the national coconut agricultural sector via Government /extension services. This information will help COGENT to modify official recommendations and provide policy briefs to be circulated to the Ministries of Agriculture of COGENT's 39 member-countries.

This project responds partially to the emergency situation in PNG. The **presentation of workplan, objectives and progress** during the 2017 ITPGRFA Governing Body Session, where up to 140 members states will be represented will highlight PNG's commitment to this response, thereby also helping to protect critical coconut diversity.

PNG and other countries have invested resources to protect coconut biodiversity, with little or no external support. The lack of a concerted approach has allowed many field genebanks decline. Demonstrating renewed solidarity by the international community to save and upgrade the South Pacific collection will **broadcast a strong signal** to those fighting to preserve threatened biodiversity elsewhere, including all those stakeholders connected with the 2017 ITPGRFA meeting. The work will promote much-needed engagement in coconut research, and foster greater support from producer-country governments, research institutes, and private sector organisations.

20. Capacity building

If your project will support capacity building at institutional or individual levels, please provide details of what form this will take and how this capacity will be secured for the future.

(Max 300 words)

There will be three types of capacity building:

- Standard capacity building through training periods for Master's or PhD students
- Expertise capacity building through mixed teams of junior/expert coconut specialists to conduct the field collecting/characterizing missions
- Continuous capacity building through training sessions of the future genebank staff in order to help them in fulfilling the highly specific technical tasks to run a coconut genebank and the requirements for working on an Art.15 collection (use of SMTA, quality standards, reporting etc.).

The project aims also to train the permanent staff of the future genebanks and the students trained during the project will be, where possible, recruited for working in collaboration with the future genebanks. The management and technical staff of the 3 sites will have the same training session in the same place at the same time in order to create a "core team spirit". The ITEX (as agreed in the ToRs) will be required to remain at the disposal of the staff members of the genebanks one full year after the end of the project to respond to any questions (through Emails).

On request and at the expense of each country, experts can individually visit the future genebank locations for consultancies. COGENT will always help in providing a list of the experts if needed.

Targeting of capacity building to include women and men researchers, as well as young and more seasoned stakeholders will help ensure continuity. Using mixed teams of more experienced, sometimes non-local staff with less-experienced local staff and including COGENT technical staff, will provide continuity and generate a strong team spirit, helping **build local capacity**, and increasing awareness of local staff and populations. In such mixed teams, local team-members can also provide a bridge to improve dialogue quality, and more effectively transfer knowledge to local populations.

21. Access to project information

Please describe the project's open access plan and detail any specific costs you are seeking from Darwin to fund this.

(Max 250 words)

As a 'Darwin-Coconut Initiative' (DCI) sub-site, dedicated web-pages on [COGENT's website](#) will be developed and managed by a part-time consultant, including writing articles and managing an images database to share project events and progress. Partners will provide input and Bioversity editorial support. The project will subscribe to a site for professional photo-sharing, and establish links between partner websites and the DCI webpages. The sub-website will be integrated into the COGENT website at project end

Rules for COGENT-linked articles require scientists to publish in open-access journals, ensuring the research benefits are freely shared with the global coconut community.

Regarding policies, governance and institutional involvement, interim project results, will be presented at the next ITPGRFA Governing Body Session, given the work's direct link to the TREATY agenda. The COGENT coordinator or his/her representative will present project progress during the 7th Governing Body Session in 2017, requiring travel-funding for this person to attend. With up to 140 countries attending the plenary, it will heighten visibility. Government technical and policy briefing notes will be prepared for this event and for the final project meeting. The project will hold a side-event to promote its work.

Interviews of future and current genebank curators and Government representatives will be captured on locally produced videos, at project inception and final meetings, and during collecting missions to demonstrate progress, and as a monitoring tool for capturing change. Judicious local media coverage/campaigns, using a local agent will inform and influence key stakeholders.

22. Match funding (co-finance)**a) Secured**

Provide details of all funding successfully levered (and identified in the Budget) towards the costs of the project, including any income from other public bodies, private sponsorship, donations, trusts, fees or trading activity.

Confirmed:

Please find enclosed the funding from the partners' institutions.

All the public partners' institution offered the time of their staff to collaborate to this project. The Government of Fiji and Samoa will also participate in the logistics of the collecting mission and some of the meetings (Fiji)

22b) Unsecured

Provide details of any matched funding where an application has been submitted, or that you intend applying for during the course of the project. This could include matched funding from the private sector, charitable organisations or other public sector schemes.

Date applied for	Donor organisation	Amount	Comments
June 2015	PNG Government	£72,053	A 4-year project to relocate the ICG in Papua New Guinea and address Bogia syndrome has been submitted to the NPG Government (GoPNG) in June 2015. At this stage GoPNG funded 2.5 million Kinas for 2016. KIK will continue to negotiate with the Department of Planning to secure the remaining funds from 2017 to 2019. The collection of accessions and training of the genebank staff is part of the KIK project and cost could be shared with this Darwin initiative.

22c) None

If you are not intending to seek matched funding for this project, please explain why.

(max 100 words)

23. LOGICAL FRAMEWORK

Darwin projects will be required to report against their progress towards their expected outputs and outcomes if funded. This section sets out the expected outputs and outcomes of your project, how you expect to measure progress against these and how we can verify this.

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p>Impact: (Max 30 words) Coconut stakeholders and scientists have used and have had better access to wider genetic diversity, facilitating new breeding outputs, ultimately benefitting at least 10 million people within the Asia-Pacific.</p>			
<p>Outcome: (Max 30 words) Critical knowledge, capacities and approaches developed to conserve endangered, critical coconut germplasm from Fiji, Samoa, and PNG, ensuring a stable future for coconut breeding and production</p>	<p>0.1 One regional and three national maps of the most endangered zones for coconut cultivars in Fiji, Samoa and PNG regarding sea-level rise and climate change are available to women and men coconut scientists and policy makers by the end of year 1 of the project</p> <p>0.2 There is an agreement by the project SC, on a standardized methodology to collect, identify, characterize and register new accessions for COGENT members (at a global level) at the beginning of year 2 of the project, with an awareness of gendered trait preferences</p> <p>0.3 The number of conserved accessions in the Pacific Genebank has increased by 10% (between 5 to 10 new accessions have been identified and recorded in the CGRD database)</p>	<p>0.1. Maps published on the COGENT and SPC websites during first year of the project</p> <p>0.2. Published guidelines for collecting new accessions on the COGENT Website</p> <p>0.3. Genebank records (# Pacific accessions recorded in the Coconut Genetic Resources Database, (CGRD) before and after the project</p> <p>0.4a Training certificates /records of women and men staff operating in genebanks (or nurseries to prepare the genebanks) are available online on the COGENT website (page of the regional genebank)</p> <p>0.4b An MOU is signed within the 3 genebanks to define and agree their governance and collaboration</p> <p>0.5. MOAs signed and registered at FAO and the Secretariat of the</p>	<ul style="list-style-type: none"> •Policy makers, Ministries of Agriculture and private sector bodies have gender-equitable access to coconut production climate-change scenarios and the corresponding risks, so they can better manage/anticipate the protection/erosion of the biodiversity •The maps will help in rationalizing the 5 COGENT ICGs •COGENT member countries will share a methodology to increase the number of accessions in the genebanks network •Women and men trained staff aware of the multilateral system will help in improving the exchange between genebanks at regional and international levels •More comprehensive conservation will lead to wider use and improved coconut livelihoods •The Pacific Region will be more

Project summary	Measurable Indicators	Means of verification	Important Assumptions
	<p>by the end of the project</p> <p>0.4 At least 9 Genebank staff (30% female) from Fiji, Samoa and PNG are trained to manage the genebank according to the rules of the multilateral system, supported by the ITPGRFA and according to the technical guidelines recommended by COGENT in year 3</p> <p>0.5 The creation of the multi-site genebank is ratified by the end of the project with signed MOAs between the 3 countries and Bioversity International/COGENT or SPC and FAO/ITPGRFA</p>	<p>ITPGRFA</p> <p>0.6 List of COGENT members on the Website before and after the project</p>	<p>involved in the Global Conservation Effort for future generations</p> <ul style="list-style-type: none"> Assuming fully comprehensive gender-equitable partner engagement beyond the project life There will be no legal/diplomatic insurmountable constraints regarding the MOAs and MOU preparation and signature Any phytosanitary risk will be effectively addressed and not impact on germplasm transfer, from collection and distribution.
<p>Outputs:</p> <p>1. Maps and models of current and future threatened coconut cultivated areas in the Pacific have been made available on the COGENT and SPC Websites</p>	<p>1.a Four Maps and models to predict the impact of future climate change on the target counties' "coconut ecosystem" accessible on the COGENT, CIRAD and SPC websites by the end of year 1</p> <p>1b 2 to 3 journal publications of new methodology available to predict the evolution of coconut production areas in the future due to climate change by the end of year 2</p>	<p>1a: check COGENT and SPC Websites</p> <p>1b: article(s) published online in open access</p>	<ul style="list-style-type: none"> Maps will be meaningful, accurate, understandable, compatible with local systems, accessible, usable and used Uncollected diversity in less-endangered zones will not be wiped out before it has been conserved That the prediction tool will be sufficiently accurate and simple to be used and implemented by a great number of gender-balanced stakeholders such as policy makers, NGOs, private sector
<p>2. An effective, gender-sensitive coconut germplasm management plan for the Asia Pacific</p>	<p>2a: gender-balanced ITEX n°1 – one proposed guidelines for the choice of</p>	<p>2a. Guidelines are published, available on COGENT website in several languages during year 2</p>	<ul style="list-style-type: none"> COGENT member countries will have access to the guidelines, methodology and selection criteria

Project summary	Measurable Indicators	Means of verification	Important Assumptions
developed	<p>Pacific cultivars to be preserved by the end of the first year (also relevant to cultivar choice elsewhere)</p> <p>2b. ITEX n°1 publishes one list of all the cultivars currently preserved and to be preserved (not only endangered) in the ICG-SP following the Global Strategy of COGENT.</p> <p>2c. By early year 2, one overall collection plan (3 country subsections) is designed by ITEX n°1 based on the results of the mapping</p> <p>2d. Between 5 and 10 accessions moved by genebank staff and/or collecting teams to a nursery at one of the 3 sites of the ICG-SP by the end of the project</p> <p>2e. ITEX n°2 prepare the MOU to organize the governance within the 3 sites of the genebanks by the middle of year 3, with gendered considerations</p> <p>2f. ITEX n°2 prepare the MOAs to be signed between the different institutions (local research institutions or Government, Bioversity International/COGENT, SPC, and FAO/Treaty) by the end of year 2, MoAs to include gendered</p>	<p>2b. The cultivar lists for the 3 sites will be published in a scientific article and on the institutions' Websites (about 60 cultivars should be on the list)</p> <p>2c. A report on the plan (strategy) of collect is published on the COGENT and SPC websites</p> <p>2c. Mission report of the mixed teams junior/senior experts available on the COGENT and SPC Websites</p> <p>2d. consultation of the CGRD: at least 5 new accessions are recorded and well documented</p> <p>2e. MOU signed between the 3 managers of the genebanks</p> <p>2f. MOAs are signed by the end of the project and published on the COGENT and SPC Websites</p>	<p>and they apply it in their own countries</p> <ul style="list-style-type: none"> • That as much as possible representative diversity has been identified and will be conserved • data are easily accessible <u>to all</u> and safeguarded • The coconut biodiversity preserved in the 3 sites is secured by the signature of MOAs and the genebanks have a clear governance system at the regional level • That the isolated nature of the genebank locations will not be a disincentive to staff remaining to work there.

Project summary	Measurable Indicators	Means of verification	Important Assumptions
	considerations where appropriate.		
3. Training and capacity building provided to the staff of the 3 genebanks and to young scientists	<p>3a. One PhD student, is recruited <u>(if candidates comparable in all other respects will consider appointing a female candidate)</u> and begins the thesis work during the first year of the project (preferably to become a coconut breeder working on one of the 3 sites)</p> <p>3b. At least 6 MSc students (2 for mapping, 1 for Policy, 2 for breeding and 1 for database) are trained in the coconut field by end of project, <u>aiming for at least half of students to be female if competence available.</u></p> <p>3c. At least 9 persons <u>(30% female)</u> of the future staff of the ICG-SP are trained by end of project</p>	<p>3a. A document is describing the thesis topic and workplan + report of the SC of the first year of the PhD student.</p> <p>3b. MSc reports published on COGENT Website (6)</p> <p>3b. Scientific articles are published in open access journals (1 or 2)</p> <p>3c. Certificate of training of staff (at least 9 persons, <u>with declared gender balance</u>)</p>	<ul style="list-style-type: none"> • That <u>young</u> breeders will contribute expected breeding outputs • That the breeder will build the capacity of other <u>men and womens</u> in the Pacific Region • Masters students will participate in future coconut GR projects and disseminate coconut GR knowledge • That capacity will be effectively built and harnessed, <u>in a gender-equitable manner</u> • The ICG will begin to put in place internal procedures to share germplasm internationally
<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>Output 1</p> <p>1.1 Kick-off meeting with the partners, back to back to a first SC meeting, <u>aiming for best gender balance</u></p> <p>1.2 State of the art on the climate change threats and GIS in the South Pacific countries. Search for climate change and sea level rise forecast in the future 40 years. Search for mapping of current or past coconut palm plantings at any scale. (2 MSc)</p> <p>1.3 If not available creation of a map of the coconut cultivation area in the countries targeted by the project</p> <p>1.4 Creation of the maps of the current and future endangered coconut cultivated areas in the Pacific.</p> <p>Output 2</p> <p>2.1 Establishment and validation of the ToRs of the 2 International teams of Experts (ITEx) by the SC, <u>aiming for best gender balance</u></p> <p>2.2 Constitution of the two <u>gender-balanced</u> ITEx and recruitment of the experts (contract's signature with the corresponding institutions (LoAs))</p> <p>2.3 ITEx n°1 builds a protocol and write guidelines for the identification/characterization/collection and transport of the new accessions (1 PhD). The team also make a list of the current and potentially interesting cultivars for the international collection</p> <p>2.4 State of the art and revision of the status of the current ICG-SP by the ITEx n°2 and preparation of the documents for collecting missions and subsequent governance (1 MSc)</p> <p>2.5 <u>Gender-sensitive W</u>orkshop (combined to the 3rd SC Meeting) to communicate, discuss and endorse the results of the mapping, the guidelines, finalize the list of</p>			

Project summary	Measurable Indicators	Means of verification	Important Assumptions
cultivars and design a plan of collect.			
2.6 Validation of the guidelines, protocols, list and plan of collect by the 3rd SC. Preparation of the workplan for year 2.			
2.7 Official presentation of the project at the 7th Governing Body Session of the Treaty			
2.9 Preparation of the 3 sites or quarantine areas for the newly collected accessions (nurseries and sanitary issues)			
2.8 Different missions by the mixed teams junior/expert for identification/characterization/collection of endangered cultivars (2 MSc and 1 PhD)			
2.10 Preparing and recording the accessions in CGRD (COGENT database) (1 MSc)			
2.11 Movement of some of the cultivars to the designated 3 sites			
2.12 Workshop with ITEX n°2 and project partners back to back the 4th SC meeting of the project to discuss and present the documents to be endorsed by the SC Meeting of COGENT in 2018 (year 3, Q3) and the PAPGREN network in??			
2.13 Signature of the MOAs and MOU at the final meeting of the project or at the COGENT SC Meeting in 2018 (which could be held back to back in the same place in PNG?). Official restitution to the Governments.			
Output 3			
3.1 Training the ICG staff (gender equitable)			
3.2 One PhD student to participate to the project and to be employed by the ICG, (preferably female)			
3.3 2 MSc students to support the ITEX n°1 (breeding and collection)			
3.4 1 MSc student to support the ITEX n°2			
3.5 2 MSc student to support to mapping			
3.6 1 MSc student to support database CGRD			

24. Provide a project implementation timetable that shows the key milestones in project activities. Complete the following table as appropriate to describe the intended workplan for your project (Q1 starting April 2016)

Activity	No of months	Year 1				Year 2				Year 3			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Output 1													
1.1 Kick-off meeting with the partners, back to back to a first SC meeting	2	x											
1.2 State of the art on the climate change threats and GIS in the South Pacific countries. Search for climate change and sea level rise forecast in the future 40 years. Search for mapping of current or past coconut trees plantation at any scale. (2 MSc)	3		x	x									
1.3 If not available creation of a map of the coconut cultivation area in the countries targeted by the project	6			x	x								
1.4 Creation of the maps of the current and future endangered coconut cultivated areas in the Pacific.	6				x	x							
Output 2													
2.1 Establishment and validation of the ToRs of the 2 International teams of Experts (ITEx) by the SC	1		x										
2.2 Constitution of the two ITEx and recruitment of the experts (contract's signature with the corresponding institutions (LoAs))	4			x	x								
2.3 ITEx n°1 build a protocol and write guidelines for the identification/characterization/ collection and transport of the new accessions (1 PhD). The team also make a list of the current and potentially interesting cultivars for the international collection	4			x	x								
2.4 Workshop (combined to the 3rd SC Meeting) to communicate, discuss and endorse the results of the mapping, the guidelines, finalize the list of cultivars and design a plan of collect. Validation of the guidelines, protocols, list and plan of collect by the 3 rd SC. Preparation of the workplan for year 2.	1					x							
2.5 Official presentation of the project at the 7 th Governing Body Session of the Treaty								x					
2.6 Preparation of the 3 sites or quarantine areas for the newly collected accessions (nurseries and sanitary issues)	12	x	x	x	x	x							

Activity		No of	Year 1				Year 2			Year 3			
2.7	Different missions by the mixed teams junior/expert for identification/characterization/collection of endangered cultivars (2 MSc and 1 PhD)	12					x	x	x	x	x	x	
2.8	Preparing and recording the accessions in CGRD (COGENT database) (1 MSc)	3					x	x	x	x	x	x	
2.9	Movement of some of the cultivars to the designated 3 sites								x	x	x	x	
2.10	State of the art and revision of the status of the current ICG-SP by the ITEX n°2 and preparation of the documents for the collecting missions and subsequent governance (1 MSc)	12	x	x	x	x	x	x					
2.11	Virtual workshop with ITEX n°2 and project partners back to back the 4 th SC meeting of the project to discuss and present the documents to be endorsed by the SC Meeting of COGENT in 2018 (year 3, Q3) and the PAPGREN network in??	1							x				
2.12	Circulation of the nearly finalized drafts of MoAs and MoU among the Government's administrations to prepare the signature									x	x	x	
2.13	Signature of the MOAs and MOU at the final meeting of the project or at the COGENT SC Meeting in 2018 (which could be held back to back in the same place in PNG?). Official restitution to the Governments.	2											x
Output 3													
3.1	Training the ICG staff					x						x	
3.2	One PhD student to participate to the project and to be employed by the ICG	34	x	x	x	x	x	x	x	x	x	x	x
3.3	2 MSc students to support the ITEX n°1 (breeding and collection)	12					x	x	x	x			
3.4	1 MSc student to support the ITEX n°2	6			x	x							
3.5	2 MSc student to support to mapping	12	x	x	x	x							
3.6	1 MSc student to support database CGRD	6					x	x					

25. Project based monitoring and evaluation (M&E)

Describe, referring to the Indicators above, how the progress of the project will be monitored and evaluated, making reference to who is responsible for the project's M&E. Darwin Initiative projects are expected to be adaptive and you should detail how the monitoring and evaluation will feed into the delivery of the project including its management. M&E is expected to be built into the project and not an 'add' on. It is as important to measure for negative impacts as it is for positive impact.

During the kick-off meeting, the Steering committee (SC) will establish an M&E team comprising a representative from each of the three target countries coordinated by a COGENT representative. Each country M&E rep will be responsible for monitoring the state of progress towards project milestones, and in conjunction with the COGENT rep, recommending adjustments in implementation where needed during 2 or 3-monthly virtual meetings. The SC will hold 6-monthly progress review meetings to revise the workplan and address project management issues. Besides the SC, a yearly audit by another international genebank will evaluate project progress. A final external evaluation against objectives will review progress along the impact pathway.

In monitoring progress towards project outcome, the M&E team will assess:

1. the availability quality, accuracy and user-friendliness of maps/models of the most endangered zones for coconut cultivars in target countries (first 6 months and then 12 months)
2. progress towards a finalised standardized methodology to collect, identify, characterize and register new accessions for COGENT members (at a global level) at the beginning of year 2 of the project (first 6 months and then 12 months), including guidelines, data management, articles and collections plan relating to this.
3. The number of accessions identified, recorded and effectively conserved by the end of the project. This will involve an initial, annual and final review of amount and nature of germplasm listed, identified, characterised, transferred (reviewing SMTAs) and conserved in the multi-site genebank and recorded in the CGRD. It will be important to review both documentation and field observations. It will include a review of the collecting mission outcomes where they went, what was collected, how it was collected, and what the success rates were.
4. The progress and level of training for genebank staff (gender disaggregated) to effectively manage the genebank. This will require reference to training records and certificates, and also an annual genebank audit to assess how effectively the training is being implemented including genebank management procedures. The quality of the accessions' stock and establishment will also need to be assessed.
5. The status, progress and numbers of recruited PhD and MSc students, and the quality of their supervision and work every 6 months
6. The multi-site genebank signed MOAs between the 3 countries and Bioversity International/COGENT or SPC and FAO/ITPGRFA. This would include a review of the feasibility of the MoA, as part of the evaluation.

Project monitoring will help manage risks, and flag complacency regarding any flawed assumptions. Thus the project will be pro-active in promoting:

- use of maps to prioritise conservation initiatives;
- applying developed methodologies to increase the number of accessions in genebanks;
- awareness of the multilateral system to improve exchanges between genebanks;
- wider use of conserved germplasm
- greater involvement of the Pacific Region in global conservation for future generations
- partner engagement beyond project life
- overcoming any legal constraints regarding MOAs and MOU preparation

...and securing the political will of policy-makers and other stakeholders, so they adopt project findings to better protect biodiversity (via policy briefs).

Total budget for M&E ³	£4,500
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³ Doesn't include at least equivalent co-funding for M&E

Percentage of total budget set aside for M&E	2%
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FUNDING AND BUDGET

Please complete the separate Excel spreadsheet which provides the Budget for this application. Some of the questions earlier and below refer to the information in this spreadsheet. You should also ensure you have read the 'Finance for Darwin' document and considered the implications of payment points for cashflow purposes.

NB: The Darwin Initiative cannot agree any increase in grants once awarded.

26. Value for Money

Please explain how you worked out your budget and how you will provide value for money through managing a cost effective and efficient project. You should also discuss any significant assumptions you have made when working out your budget.

(max 300 words)

Important to 8 million Asia-Pacific stakeholders, coconut germplasm, and knowledge, capacities and approaches developed within this project for conserving threatened germplasm, are vital to ensure a stable future for coconut production. Approaches prototyped in this work will be relevant to other conservation initiatives within the region and beyond.

Our budget includes grant funds for all proponents. Furthermore, the investment will leverage co-financing at a better than 2:1 ratio, furnishing co-funding at 42% of the total program value. The \$161,626 confirmed co-funding leveraged for the project will provide vital additional funding and strengthen partners' ownership of the work. International experts from a range of institutions want to contribute due to the high priority we place on the Pacific collection.

Most direct budget costs are for human capital: scientists' time and supporting personnel to ensure a successful project. Collecting missions and training garner the next level of priority. Accompanying investments in small equipment (mobile devices etc.) will allow innovative collecting and characterizing methods, key for safety data backup. As travel costs and accommodation are high for the Pacific, project design includes virtual meetings, including for ITEX and SC, using videoconference facilities of partner institutions, or from external services when they are not available.

We have developed the budget with some assumptions. First, Bioversity expects CGIAR Research Program second stage to provide cofinancing to offset certain personnel and overhead costs. The second stage programs are still being written (for 2017 forwards). Second, project staff (including partners) will have an integral role in project M&E. Therefore, the percentage stated for M&E may look artificially low. For instance, partner staff will serve as M&E representatives and costs are kept down through bi-monthly virtual meetings. Using a genebank-to-genebank audit approach also keeps down costs (rather than hiring a consulting firm), and provides better space for learning.

27. Capital items

If you plan to purchase capital items with Darwin funding, please indicate what you anticipate will happen to the items following project end.(max 150 words)

The project will buy:

- 3 (one per genebank) computers and external hard disk-drives for data storage, remaining under the responsibility of the 3 data genebank managers.
- Mobile devices and software (as appropriate and recommended by the ITEX) to collect and characterize accessions in the field. They will remain COGENT's responsibility after project end to be at the disposal for use by any genebank of the Network.

- a toolkit for measuring traits of the accessions (refractometers, digital calipers). It will be held in trust at one genebank so that it can be used later to characterize the accessions in the collection.

FCO NOTIFICATIONS

Please check the box if you think that there are sensitivities that the Foreign and Commonwealth Office will need to be aware of should they want to publicise the project's success in the Darwin competition in the host country.

Please indicate whether you have contacted your Foreign Ministry or the local embassy or High Commission (or equivalent) directly to discuss security issues (see Guidance Notes) and attach details of any advice you have received from them.

Yes (no written advice) **Yes, advice attached** **No**

CERTIFICATION

On behalf of the trustees of **BIOVERSITY INTERNATIONAL**

I apply for a grant of **£317,884** in respect of **all expenditure** to be incurred during the lifetime of this project based on the activities and dates specified in the above application.

I certify that, to the best of our knowledge and belief, the statements made by us in this application are true and the information provided is correct. I am aware that this application form will form the basis of the project schedule should this application be successful.

(This form should be signed by an individual authorised by the applicant institution to submit applications and sign contracts on their behalf.)

- I enclose CVs for key project personnel and letters of support.
- I enclose our most recent signed audited/independently verified accounts and annual reports (if appropriate), which are also accessible in the links supplied below

2014:

- [http://www.bioversityinternational.org/index.php?id=244&tx_news_pi1\[news\]=6640&cHash=d534bb5451a9b4b373a9c8bd5fff16c0](http://www.bioversityinternational.org/index.php?id=244&tx_news_pi1[news]=6640&cHash=d534bb5451a9b4b373a9c8bd5fff16c0)
- [http://www.bioversityinternational.org/index.php?id=244&tx_news_pi1\[news\]=6012&cHash=dfba445a091a655cc64ec337c84df0e0](http://www.bioversityinternational.org/index.php?id=244&tx_news_pi1[news]=6012&cHash=dfba445a091a655cc64ec337c84df0e0)

2013:

- http://www.bioversityinternational.org/uploads/tx_news/Bioversity_AR13_final_web_low-res_1773_05.pdf
- http://www.bioversityinternational.org/uploads/tx_news/Bioversity_International_financial_statements_2013_1736_02.pdf

Name (block capitals)	M. ANN TUTWILER
Position in the organisation	DIRECTOR GENERAL

Signed**

Date:

30TH November 2015

If this section is incomplete or not completed correctly the entire application will be rejected. You must provide a real (not typed) signature. You may include a pdf of the signature page for security reasons if you wish. Please write PDF in the signature section above if you do so.

Stage 2 Application – Checklist for submission

	Check
Have you read the Guidance Notes ?	√
Have you provided actual start and end dates for your project?	√
Have you indicated whether you are applying for DFID or Defra funding? NB: you cannot apply for both	√
Have you provided your budget based on UK government financial years i.e. 1 April – 31 March and in GBP?	√
Have you checked that your budget is complete , correctly adds up and that you have included the correct final total on the top page of the application?	√
Has your application been signed by a suitably authorised individual? (clear electronic or scanned signatures are acceptable)	√
Have you included a 1 page CV for all the key project personnel identified at Question 10?	√
Have you included a letter of support from the <u>main</u> partner organisations identified at Question 9?	√
Have you been in contact with the FCO in the project country/ies and have you included any evidence of this?	√
Have you included a signed copy of the last 2 years annual report and accounts for the lead organisation?	√
Have you checked the Darwin website immediately prior to submission to ensure there are no late updates?	√

Once you have answered the questions above, please submit the application, not later than 2359 GMT on Tuesday 1 December 2015 to Darwin-Applications@itsi.co.uk using the application number (from your Stage 1 feedback letter) and the first few words of the project title **as the subject of your email**. If you are e-mailing supporting documentation separately please include in the subject line an indication of the number of e-mails you are sending (eg whether the e-mail is 1 of 2, 2 of 3 etc). You are not required to send a hard copy.

DATA PROTECTION ACT 1998: Applicants for grant funding must agree to any disclosure or exchange of information supplied on the application form (including the content of a declaration or undertaking) which the Department considers necessary for the administration, evaluation, monitoring and publicising of the Darwin Initiative. Application form data will also be held by contractors dealing with Darwin Initiative monitoring and evaluation. It is the responsibility of applicants to ensure that personal data can be supplied to the Department for the uses described in this paragraph. A completed application form will be taken as an agreement by the applicant and the grant/award recipient also to the following:- putting certain details (ie name, contact details and location of project work) on the Darwin Initiative and Defra websites (details relating to financial awards will not be put on the websites if requested in writing by the grant/award recipient); using personal data for the Darwin Initiative postal circulation list; and sending data to Foreign and Commonwealth Office posts outside the United Kingdom, including posts outside the European Economic Area. Confidential information relating to the project or its results and any personal data may be released on request, including under the Environmental Information Regulations, the code of Practice on Access to Government Information and the Freedom of Information Act 2000.