



Submit by Monday 3 December 2012

DARWIN INITIATIVE APPLICATION FOR GRANT FOR ROUND 19: 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.

ELIGIBILITY

1. Name and address of organisation (NB: Notification of results will be by post and email to the Project Leader)

Name: Stuart Cable	Address: Royal Botanic Gardens, Kew Richmond Surrey TW9 3AB
------------------------------	--

2. Stage 1 reference and Project title

1958: Madagascar Agroforestry Livelihoods Project

3. Project dates, duration and total Darwin Initiative Grant requested, matched funding

Proposed start date: April 2013		Duration of project: 3 years		End date: March 2016	
Darwin request	2013/14 £	2014/15 £	2015/16 £	2016/17 £	Total £ 263,344
Proposed (confirmed and unconfirmed) matched funding as percentage of total Project cost: matched funding required is 44%, of which 62% is confirmed and 38% unconfirmed					

4. Define the outcome of the project. This should be a repetition of Question 24, Outcome Statement.

(max 100 words)

Agricultural productivity, forest cover and biodiversity are increased on deforested land in COFAV and Itremo, through forest restoration and locally adapted, low-input agroforestry systems, that emphasise sustainable soil management and native species and that offer communities viable alternatives to the prevalent damaging agricultural practices such as slash and burn cultivation. At least 3,000 households in 30 communities will benefit directly with improved livelihoods.

5. 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: Madagascar	Country 2:
Country 3:	Country 4:

6. Biodiversity Conventions

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

Convention On Biological Diversity (CBD)	Yes
Convention on Migratory Species (CMS)	No
Convention on International Trade in Endangered Species (CITES)	No

6b. Biodiversity Conventions

Please detail how your project will contribute to the objectives of the convention(s) 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)

The project will help Madagascar to deliver GSPC Targets 2, 3, 4, 5, 6, 7, 8, 12, 13 and 14 of the CBD, particularly 5 and 7 (*in-situ* conservation) and 6 and 12 (sustainable management).

The project will help Madagascar to deliver Aichi Strategic Goals A, B, C, D and E of the CBD, particularly D (enhance the benefits to all from biodiversity and ecosystem services) and E (enhance implementation through participatory planning, knowledge management and capacity building).

The project will benefit the conservation of biodiversity and maintenance of ecosystem services of two protected areas, the Itremo Massif (Itremo) and the Ambositra-Vondrozo Forest Corridor (COFAV), by enabling and supporting communities to engage in agroforestry and forest restoration.

Is any liaison proposed with the CBD/CITES/CMS focal point in the host country?

Yes No if yes, please give details:

We plan to contact Mme Laurette Hermine Rasoavahiny, Directeur du Système des Aires Protégées, Ministère de l'Environnement et des Forêts.

7. Principals in project. Please identify and provide a one page CV for each of these named individuals. You may copy and paste this table if you need to provide details of more personnel or more than one project partner.

Details	Project Leader	Project Partner 1	Project Partner 2
Surname	Cable	Raharisoa	Ramamonjisoa
Forename (s)	Stuart	Eugenie	Lolona
Post held	Head of Madagascar Science Team	FBM/NT National Coordinator	Director
Institution (if different to above)		Feedback Madagascar Ny Tanintsika	Silo National des Graines Forestières
Department	Millennium Seed Bank Project - Conservation		
Telephone			
Email			

8. Has your organisation received funding under the Darwin Initiative before? If so, please provide details of the most recent (up to 6 examples).

Reference No	Project Leader	Title
EIDPO026	Kate Hardwick	A forest restoration research unit facilitating biodiversity recovery in Cambodia
17-021	Kate Hardwick	Restoring Tropical Forests: a Practical Guide
16-012	Hugh Pritchard	Orchid Seed Stores for Sustainable Use (OSSSU)
15-036	Paul Smith	Monitoring and Managing Biodiversity Loss in South-East Africa's Montane Ecosystems
15-035	Steve Alton	Ex-situ Conservation of the Rare and Threatened Plants of Mauritius
15-034	Yvette Harvey	Red List Plants of Cameroon

9a. IF YOU ANSWERED 'NO' TO QUESTION 8 please complete Question 9,

What year was your organisation established/ incorporated/ registered?	
What is the legal status of your organisation?	NGO Yes/No Government Yes/No University Yes/No Other (explain) Yes/No
Type of organisation (e.g. University, NGO, private sector, Government Department etc)	
Have you unsuccessfully applied to the Darwin Initiative before? If yes please provide the application reference number(s)	
How is your organisation currently funded?	(Max 100 words)
Have you provided appropriate audited/independently examined accounts?	Yes/No

9b. Provide detail of 3 contracts previously held by your institution that demonstrate your credibility as a research organisation and provide track record relevant to the project proposed. These contracts should have been held in the last 5 years and be of a similar size to the grant requested in your Darwin application.

Contract 1 Title	
Contract Value	
Contract Duration	
Role of institution in project	
Brief summary of the aims, objectives and outcomes of the contract.	
Reference contact details (Name, e-mail, address, phone number).	

Contract 2 Title	
Contract Value	
Contract Duration	
Role of institution in project	
Brief summary of the aims, objectives and outcomes of the contract.	
Reference contact details (Name, e-mail, address, phone number)	

Contract 3 Title	
Contract Value	
Contract Duration	
Role of institution in project	
Brief summary of the aims, objectives and outcomes of the contract.	
Reference contact details (Name, e-mail, address, phone number).	

9c. Describe briefly the aims, activities and achievements of your organisation. (Large institutions please note that this should describe your unit or department)

Aims (50 words)
Activities (50 words)
Achievements (50 words)

10. 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>Royal Botanic Gardens Kew (RBG Kew)</p> <p>www.kew.org</p>	<p>Details (including roles and responsibilities and capacity to engage with the project): (max 200 words)</p> <p>RBG Kew will provide institutional management and administration, as well as technical steering and training in key areas such as GIS, remote sensing, ecological surveys, taxonomy, horticulture and forest restoration.</p> <p>The project will be implemented through the Kew Madagascar Conservation Centre (KMCC), based in Antananarivo and staffed by eight Malagasy botanists. Our Itremo Project Officer will be dedicated full-time to this Darwin project, and smaller technical and administrative roles will also be fulfilled from within the current KMCC team.</p> <p>KMCC is the lead organisation managing the new 273 km² Itremo Massif Protected Area and has just submitted a management plan, developed with the local communities, to the Government of Madagascar for approval. The local communities are already organised into community-based associations (COBAs) to implement management work for the protected area and are eager to collaborate with this project.</p>
---	---

<p>Partner Name and website where available:</p> <p>Feedback Madagascar: Ny Tanintsika (FBM/NT)</p> <p>www.feedbackmadagascar.org</p>	<p>Details (including roles and responsibilities and capacity to engage with the project): (max 200 words)</p> <p>FBM/NT have worked for 17 years with communities in the Ambositra-Vondrozo Corridor (COFAV) Protected Area and <i>tapia</i> forest adjacent to Itremo, promoting community led integrated development and conservation.</p> <p>They have direct experience in establishing forest-based industries including honey, basketry and wild silk production; training 250 weavers; implementing marketing initiatives linking producers to international markets (Europe, USA); realising participatory planning and project implementation for a variety of land management projects including the creation of Madagascar's first school reserve, watershed restoration, irrigation and reforestation initiatives; leading the establishment of 30 Community Forest Management Groups (CFMs) and forest management contracts; delivering a variety of community health, income generation and agricultural projects.</p> <p>In 2005 FBM Programme Officer Sam Cameron received an MBE for services to health care and development.</p> <p>FBM/NT have been involved in all stages of project conception and design, consulting beneficiaries and meeting with operating partners. They will participate in all aspects of community mobilisation, agroforestry and income generating activity (IGA), promotion, reporting, monitoring and evaluation and financial management of their allocated resources. They have recently worked with Kew a successful yam production project in COFAV.</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>Silo National des Graines Forestières (SNGF)</p>	<p>Details (including roles and responsibilities and capacity to engage with the project): (max 200 words)</p> <p>The role of SNGF in the project will be to build tree nurseries, train community technicians and project extension workers, help develop and monitor planting programmes and provide technical guidance for the selection of species and individual trees for propagation.</p> <p>SNGF is the National Seed Bank and has worked for 26 years developing capacity in Madagascar for the collection, storage and utilisation of forest seeds. Since 2000, it has worked with RBG Kew's Millennium Seed Bank to conserve the seeds of 2,500 species by 2020. It plays a central role implementing national forestry and environmental policy and works directly with communities to support rural development, food security, poverty alleviation and adaptation to climate change.</p> <p>SNGF has established over 200 community tree nurseries around Madagascar and has trained numerous community technicians to collect seeds and to propagate plant and maintain trees. SNGF employs 3 mobile field teams and several field offices throughout Madagascar. In the 1990s it participated in research on useful tree species and domestication in the COFAV (Ranomafana) region.</p>
---	---

Have you included a Letter of Support from this institution?	Yes
--	-----

11. Have you provided CVs for the senior team including the Project Leader	Yes
--	-----

TECHNICAL EXCELLENCE

12. Problem the project is trying to address

Please describe the problem your project is trying to address. For example, what biodiversity and development challenges will the project address? Why are they relevant, for whom? How did you identify these problems?

(Max 200 words)

Madagascar is a globally important biodiversity hotspot in economic crisis (IMF 2011 GDP per capita ranking: 173/183). 80% of its population are subsistence farmers living on <\$1 pppd and 65% suffer regular food shortages. It has lost >33% of its forests since the 1970s and suffers the highest soil erosion rates in the world. Many plant species are threatened with extinction (e.g. IUCN: 83% of the 200 palm species). Important areas for biodiversity are known and the protected area network in development covers 10% of the land surface. The challenge is to engage communities in conservation by providing viable alternatives to damaging agricultural practices and by increasing productivity and tree cover on deforested land. The Madagascar CBD Progress Report states that sustainable agricultural improvement is a national priority: <https://www.cbd.int/doc/world/mg/mg-nr-04-en.pdf>.

The project will work with communities in Itremo and COFAV towards implementing forest management plans, critical for retaining the support of communities and for building awareness of the importance of biodiversity, forests, genetic resources and sustainable agriculture for improving livelihoods and maintaining ecosystem services. The project will help Madagascar meet obligations under the CBD (GSPC and Aichi targets) by demonstrating effective agroforestry models that can be scaled-up throughout the country.

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 – repeat from Stage 1 with changes highlighted)

Slash and burn cultivation (*tavy*) is the main driver of deforestation and erosion of biodiversity in COFAV and other humid forest areas. Grassland burning is the driver in Itremo and the savannas of the central highlands. Together, COFAV and Itremo are representative of the vegetation, ecosystems and agricultural practices covering two-thirds of Madagascar.

In humid regions upland rice is the favoured crop and comprises 50% of diets. Only one successful crop is grown after *tavy*, followed by cassava in the second and third year before the plot is abandoned. Fallow periods are reduced to 3-5 years in many areas and after 2-3 cycles soil becomes exhausted and grasses dominate. We aim to replace *tavy* with sustainable food production around villages, based on an agroforestry system that integrates biodiversity conservation.

The project will rehabilitate deforested land, through agroforestry (e.g. alley-cropping, managed fallows, fruit orchards and forest gardens) based on native useful species. The agricultural focus will be on producing surplus of staples (e.g. yams, upland rice), fruit trees and cash-crops (e.g. vanilla, essential oils). Studies in the 1990s initiated by SNGF found that communities around Ranomafana gathered fruit from 73 tree species (25% unidentified). Domestication and

sustainable utilisation of wild species will increase food supply through 'hungry months' and increase incomes.

The transition to agroforestry will start with fast growing crops that can be harvested within the first and second years, followed by incremental integration of endemic/native agroforestry species (e.g. *Trema* and *Albizia* spp.) that tolerate acid soils, fix nitrogen, coppice, have rich associations with insects and soil organisms and provide good mulch and fuel wood. **Selection of species will be participatory and the agroforestry system will follow the successful Inga model pioneered by RBG Kew and the Inga Foundation in Latin America.**

In COFAV, forest management plans have been developed by Conservation International and agreed by communities. The project will focus on a 250 km² area and 20 communities (c.2,000 households) as a model for other communities and regions to follow. Restoration will focus on extending forest margins and linking fragments.

In Itremo, KMCC is currently developing a management plan for the protected area and will help the communities and forestry department to develop management plans for forests that have recently been passed to the communities from the state. The extended project covers 750 km² (Itremo PA covers 273 km²) and involves 10 communities (c.1,000 households). Restoration will focus on tapia forests, which are important for silk and fruit.

The project will be implemented through COBAs and CFMs with demonstration plots, farm visits, community technicians, manuals and workshops. **FBM/NT will coordinate with the communities and focus on the production, manufacturing and commercialisation of natural-based products (e.g. food crops, silk from Itremo and essential oils from COFAV) and on developing supply chains to market (e.g. silk scarves to Kew shops).** RBG Kew will focus on biodiversity and vegetation surveys, remote sensing, ecological profiling and identifying useful species. **SNGF will focus on building tree nurseries, tree planting and domestication of wild species.**

14. Outcome

Detail what the expected outcomes of this work will be. The outcome should identify what will change and who will benefit. The outcome should refer to how the project will contribute to reducing poverty while contributing to sustainable development and management of biodiversity and its products. A summary statement of this outcome should be provided in question 4 and 24.

(Max 250 words)

Locally adapted, low-input agroforestry models, emphasising sustainable soil management and native species, that offer communities viable alternatives to unsustainable practices, such as slash and burn cultivation (tavy), and help to restore agricultural productivity, forest cover and biodiversity on deforested land.

The project will cover 1,000 km² and involve 30 communities, bringing direct benefits to c.3,000 households and indirect benefits to 100,000s living downstream of water catchments. We will demonstrate that upland rice and other staples can be grown sustainably around villages reducing soil erosion, excessive distances between homes and crops, environmental instability and poverty. Forest conservation and restoration will maintain ecosystem services, including important populations of wild species for sustainable utilisation or as gene pools for domestication. Innovative use of new species and products will help to improve livelihoods.

The Itremo Massif has 650+ species of plants (10% locally endemic). Forest restoration and reduced burning of grasslands and inselbergs will help to conserve the remaining biodiversity. This project will reinforce efforts with communities to manage the new protected area.

COFAV has 800+ plant species (many locally endemic) and has a rich fauna including several endangered lemurs. The deforestation rate is 0.25% per year, but there are few alternatives to tavy. Conservation success depends on strong community engagement and sustainably enhancing buffer zones for increased agricultural productivity and biodiversity.

Project communities will understand links between biodiversity, forests and ecosystem services and manage their natural resources sustainably. They will help to transfer the agroforestry models and skills developed to other projects and communities.

15a. 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 that builds on, integrates and extends current programmes run by the project partners. These programmes have been funded from a variety of sources.

- RBG Kew – management of Itremo Massif Protected Area
- FBM/NT – silk production and tapia forest restoration in the Itremo region
- FBM/NT and RBG Kew – cultivation and sustainable utilisation of yams in COFAV
- FBM/NT – education and economic development in COFAV and Itremo
- SNGF – tree nurseries, tree planting, sustainable utilisation

FBM/NT has worked in the Itremo and COFAV regions for 17 years. In COFAV it implemented the Conservation International Node Programme, working with over 30 communities on production and marketing of essential oils. In the Itremo region FBM/NT has worked for over 12 years developing a silk cottage industry and international clients. Demand far exceeds supply. The project will help communities change from silk harvesters to weavers, and establish stronger lines to 'green' niche markets such as RBG Kew's shops.

The project represents a phase-change for RBG Kew's work at Itremo, from inventory to management and development, and for SNGF's widening national remit, from seed conservation and commercialisation to enabling use for IGAs, forest restoration and amelioration of climate change.

15b. 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, and explaining how your work will be additional to this work and what attempts have been/will be made to co-operate with and learn lessons from such work for mutual benefits:

15c. Are you applying for funding relating to the proposed project from other sources?

Yes No

If yes, please give brief details including when you expect to hear the result. Please ensure you include the figures requested in the spreadsheet as Unconfirmed funding.

RBG Kew has applied to the Madagascar Biodiversity Fund for support to manage the Itremo Massif Protected Area for the next 3 years. The total will be \$75,000 and we expect to hear the result within a few weeks. If successful, the funding will help to cover the costs of extension work with the communities.

16. Value for money

Please describe why you consider your application to be good value for money including justification of why the measures you will adopt will secure value for money?

(Max 250 words)

1. The project has been inspired by the beneficiaries who already have the organisational

structure, the land assets and the ambition to participate, so we expect maximum uptake.

2. c.3,000 households that will directly benefit and 100,000s of households will indirectly benefit downstream of the project watersheds.

3. It is based on a compilation of components that have been tried and tested independently, some in the target region and others in similar contexts, such as wild silk transformation and essential oil marketing.

4. The partners are locally based with existing infrastructures in the area.

5. The holistic approach of addressing the whole value chain ensures maximum returns from each component.

6. The high potential for scaling-up and for beneficiaries to adapt their skills offers more value downstream.

7. We have included rigorous efficiency elements using all existing resources such as vehicles, and offices at minimal cost.

8. We have excluded IGAs which would be ideal but riskier, such as wood carving capacity building.

9. We have minimised the international travel budget and will carry out much of the downline management by Skype and email.

The emphasis of the project is on low-cost agroforestry and self-reliance for communities. As there is no immediate prospect of widespread support for small farmers in Madagascar 'low-cost' is the driving principle of the project. Alternative means for conservation, avoided deforestation, restoring forests and intensification of agriculture would be considerably more expensive and difficult to achieve.

17. Ethics

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

(Max 300 words)

RBG Kew operates in Madagascar an *Accord de Siege* with the Government of Madagascar and Access and Benefit Sharing Agreements and Memoranda of Collaboration with key partners, such as SNGF. Its programme of research and conservation projects is implemented by a team of 8 Malagasy botanists and 3 support staff at the Kew Madagascar Conservation Centre in Antananarivo. The Itremo Massif Protected Area is managed by KMCC in collaboration with local communities, under agreement with the Government of Madagascar and following protocols developed for the implementation of the *Système des Aires Protégées de Madagascar (SAPM)*. COFAV managers and supporting NGOs, such as FBM/NT similarly collaborate with local communities under SAPM protocols. SNGF is part of the Ministry of Environment, Water and Forests and has 25 years of experience working with communities. It has worked with RBG Kew since 2000 under an agreement whereby seed collections, while duplicated at RBG Kew's Millennium Seed Bank, remain the property of the Government of Madagascar. RBG Kew has a statutory obligation to share data and the results of research as much as possible while protecting the intellectual property of partners and other stake-holders.

Kew has had a Policy on Access to Genetic Resources and Benefit Sharing since 2001 (www.kew.org/conservation/index.html). Overseas fieldwork is vetted by an Overseas Fieldwork Committee that ensures that staff are aware of and fulfil requirements of CITES and the CBD, including all national and local legislation on collecting and exporting genetic resources and associated traditional knowledge. RBG Kew has developed peer reviewed guidance for staff on working with traditional knowledge and local communities.

Target communities have given Free Prior Informed Consent (FIPC) to collaboration and the

participative approach ensures their leading input in project development.

RBG Kew's Mission: *to inspire and deliver science-based plant conservation worldwide, enhancing the quality of life.*

PATHWAY TO IMPACT

18. Legacy

Please describe what you expect will change as a result of this project with regards to biodiversity conservation/sustainable use and poverty alleviation. For example, what will be the long term benefits (particularly for biodiversity and poor people) of the project in the host country or region and have you identified any potential problems to achieving these benefits?

(Max 300 words)

The project will demonstrate an integrated model for agroforestry and forest restoration that can be scaled-up throughout Madagascar. RBG Kew and FBM/NT have already shown that simple innovations such as intensive cultivation of yams around villages will be adopted by neighbouring communities without encouragement if the techniques are perceived as increasing productivity with less effort than current practices. The local communities at Itremo and COFAV have requested help with agricultural diversification and development and this project will enable the communities to develop the skills necessary to try new species and adapt the system to meet their needs. The main legacy of the project will be the transition from a shifting cultivation in forest areas to static agroforestry around villages, which is still based on upland rice, but is enhanced with a wider range of food crops. The local economies of Itremo and COFAV are very cash poor and isolated. The introduction of a small number of high value crops and derived products with improved access to wider markets can make a significant contribution to local livelihoods.

Increasing tree cover through agroforestry and forest restoration will improve food security, protect biodiversity and help to maintain ecosystem services ahead of climate change. Planting trees is not enough; they will succumb to *tavy* without increased value being placed on forests by communities. The project will change communities perception of forests and facilitate the transition to a tree-based economy.

Even if agroforestry and forest restoration require longer than 3 years to become fully established and need significant investment to scale-up quickly over large areas, the project partners will ensure long-term success within the project areas, but scaling-up is partly dependent on the global community realigning its priorities on climate change and investing in small farmers.

19. Pathway to poverty alleviation

Please describe how your project will benefit poor people living in low-income countries. Projects are required to show how positive impact on poverty alleviation will be generated from your project in low-income countries. All projects funded under the Darwin Initiative in Round 19 must be compliant with the Overseas Development Assistance criteria as set out by the OECD. The outcomes of your research must at the very least provide insight into issues of importance in achieving poverty alleviation.

(Max 300 words)

An integrated system for protection and restoration of forests and ecosystem services and diversification of production will improve welfare, access to resources and livelihoods in the immediate future as well as protect against future stresses with climate change. The project has a three-tier strategy focused on low, mid and high value products to help alleviate poverty:

Staple crops – diversification to improve diets and food security, eliminate 'hungry months'

(between rice harvests) and produce surplus to generate income in local markets. Beans and yams have already proved popular, but work is needed to match patterns of seasonality, and markets, stabilise soil fertility and improve food storage.

Mid-value crops – new species and products for regional markets to bring a small increase in revenue to households and build community economies; e.g. honey, spices, fruit and building materials.

High-value crops - new species and products for national and international markets to bring a significant boost to household incomes and local economies; e.g. silk scarves, essential oils and vanilla.

FBM/NT has applied for a DFID GPAF Innovation Grant, which will focus on the production, manufacturing and commercialisation of natural-based products and on developing sophisticated supply chains to market. The focus will be on mid to high value products, particularly working with redundant wood carvers in COFAV, who have been denied access to traditional materials through changes in forestry laws. FBM/NT will learn whether they are successful in January 2013. This Darwin application does not replicate that project, but will seek to reinforce existing opportunities with a small number of high value products. FBM/NT already exports silk scarves to several international outlets and RBG Kew has agreed to market project products in its shops. RBG Kew and FBM/NT will explore commercial opportunities with businesses, such as supermarkets, who have already shown an interest in vanilla.

20. 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)

The project will reach a stable and sustainable end point when the project communities have practiced agroforestry over the equivalent of several *tavy* cycles, and are self-reliant on managing their forests and natural resources sustainably. The contingency exit strategy is to leave, knowledge, practices, work culture and new market relations in place that will ensure sustainable and growing benefits for future for 3000 households with raised income and 3000 hectares of sustainably managed land with innovative agroforestry.

RBG Kew, FBM/NT and SNGF are committed to helping Madagascar achieve its targets under the CBD, Millennium Development Goals and Madagascar Action Plan. All three work closely with other research, conservation and development organisations and will disseminate information in order to secure widespread benefits from the project.

Agroforestry and forest restoration take longer than 3 years to establish, but the project partners have long-term commitments in Itremo and COFAV. The project will develop an integrated strategy to shape future extension programmes and a scaled-up project with additional funding. SNGF is involved in national tree planting programmes involving over 200 communities. It is a national reference point in the forestry sector with influence to lever project principles into national policy.

HIGHLY DESIRABLE

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

(Max 300 words)

The principle components of the project focus on research, communications, knowledge sharing and dissemination with beneficiaries and wider stakeholder and decision making parties. Beneficiaries will exchange knowledge at regular meetings throughout the project. The extension workers will provide an open channel for individual communications. Training will involve demonstrations, practical trials and distribution of teaching materials, posters and a final manual. Farmer to farmer teaching and exchange visits will also be promoted. The results should be a wide ranging knowledge base with support reference materials to engender continuity and replication of successes.

The project will outwardly disseminate results in a final workshop involving the conservation and development community and national planners in Madagascar. The project will encourage communities to have an 'open-door' policy to show their farms to visiting communities and projects. The intention is to create a visually stunning agroforestry landscape, which markedly contrasts with areas outside of the project. We will fully utilise the RBG Kew website to promote the project and exploit our links with international media through our PR Team. Appropriate results will be published in scientific journals.

FBM/NT has over 17 years experience of working with communities to educate, promote conservation and development and share knowledge. The strategies include extension workers, farm visits, workshops, competitions, festivals, radio broadcasts, school lessons and videos. The project team will work hard to insure that participating communities are fully aware of their local biodiversity, its significance and its conservation status.

SNGF is a branch of the Ministry of Environment, Water and Forests with strong links to national research centres and universities. It will play a key role disseminating information about the project to a wide and strategic administrative, political, technical and scientific audience. SNGF participates in national reviews of policy, planning, strategy and legislation in the agriculture and forestry sectors.

22. Importance of subject focus for this project

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 250 words)

Significant international attention and resources have been directed at protecting Madagascar's biodiversity over the years. Huge advances have been made in national policy and legislation to protect areas and permit community management. But as yet there are very few examples of successful sustainable management of forests and poverty alleviation amongst communities. In both the Itremo and COFAV regions communities have invested in the conservation process in the promise of development returns from NGOs and government. Momentum and confidence will be lost with poor communities if they reap no benefits soon from their investments so far.

Globally, 2 billion tonnes of carbon are released into the atmosphere each year by slash and burn cultivation, more than all forms of transport combined. There are high expectations in Madagascar about the potential for carbon trading to pay for conservation through mechanisms such as REDD: Reduced Emissions from Deforestation and Degradation. Although the carbon markets and the global economy have stalled recently, when climate change eventually forces a reformulation, successful reduction of emissions will depend on communities adopting alternatives to slash and burn cultivation. The potential for subsistence farmers to reduce their emissions and sequester carbon is scarcely noted in mainstream climate debate. International support, perhaps through carbon financing mechanisms, to subsistence farmers for improving productivity and increasing tree cover on deforested land could prove to be a cost effective strategy to help reduce atmospheric carbon.

23. Leverage

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:

- Kew/KMCC staff time allocated as a matched contribution to this project is **£XXX**
- If successful, this proposal would leverage another **£XXX** from the Kew Foundation
- The Millennium Seed Bank Project has allocated **£XXX** to fund a vehicle for SNGF in support of agroforestry and forest restoration work.
- Feedback Madagascar will allocate staff time and resources as matched contribution depending on the *Tree Mad* fund-raising campaign, estimated **£XXX**. Additional matched funding will allow the project to be extended to more communities.

b) 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
11 November 2012	Madagascar Biodiversity Fund	\$XXX	3 years funding for the management of Itremo Massif Protected Area, including education, forest gardens and restoration.

PROJECT MONITORING AND EVALUATION

MEASURING IMPACT

24. 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. Further detail is provided in Annex x of the guidance notes which you are encouraged to refer to. The information provided here will be transposed into a logframe should your project be successful in gaining funding from the Darwin Initiative. The use of the logframe is sometimes described in terms of the Logical Framework Approach, which is about applying clear, logical thought when seeking to tackle the complex and ever-changing challenges of poverty and need. In other words, it is about sensible planning.

Impact

The Impact is not intended to be achieved solely by the project. This is a higher-level situation that the project will contribute towards achieving. All Darwin projects are expected to contribute to poverty alleviation and sustainable use of biodiversity and its products.

(Max 100 words)

In the COFAV and Itremo protected areas forest loss and erosion of biodiversity and ecosystem services (including soil fertility and water supply) are reduced. Resilience to climate change, food security and local livelihoods are all improved through a shift from food production dependant on damaging agricultural practices, such as slash and burn cultivation, to ecologically and economically sustainable agroforestry systems. Forest restoration helps to conserve biodiversity and maintain ecosystem services.

Outcome

There can only be one Outcome for the project. The Outcome should identify what will change, and who will benefit. The Outcome should refer to how the project will contribute to reducing poverty and contribute to the sustainable use/conservation of biodiversity and its products. This should be a summary statement derived from the answer given to question 14.

(Max 100 words)

Agricultural productivity, forest cover and biodiversity are increased on deforested land in COFAV and Itremo, through forest restoration and locally adapted, low-input agroforestry systems, that emphasise sustainable soil management and native species and that offer communities viable alternatives to the prevalent damaging agricultural practices such as slash and burn cultivation. At least 3,000 households in 30 communities will benefit directly from maintained ecosystem services and improved livelihoods.

Measuring outcomes - indicators

Provide detail of what you will measure to assess your progress towards achieving this outcome. You should also be able to state what the change you expect to achieve as a result of this project i.e. the difference between the existing state and the expected end state. You may require multiple indicators to measure the outcome – if you have more than 3 indicators please just insert a row(s).

Indicator 1	COFAV: annual forest area cleared by communities for <i>tavy</i> reduced by 30% in the project area by year 3.
Indicator 2	COFAV: increase in agricultural production on deforested land around communities is greater than the production lost through the 30% reduction in <i>tavy</i> by year 3.

Indicator 3	Increase in tree cover through restoration and agroforestry of 100 ha per community by year 3.
Indicator 4	Diversification of agricultural production around communities, with adoption of at least 5 new species per community by year 3.
Indicator 5	Increase in average income for participating household from 30,000-60,000 Ariary (£8-16) per month to 45,000-90,000 Ariary (£12-24) per month by yr 3.

Verifying outcomes

Identify the source material the Darwin Initiative (and you) can use to verify the indicators provided. These are generally recorded details such as publications, surveys, project notes, reports, tapes, videos etc.

Indicator 1	Remote sensing data and ground truthing surveys.
Indicator 2	Community-based surveys and questionnaires.
Indicator 3	Remote sensing data and ground truthing surveys.
Indicator 4	Community-based surveys and questionnaires.
Indicator 5	Community-based surveys and questionnaires.

Outcome risks and important assumptions

You will need to define the important assumptions, which are critical to the realisation of the *outcome and impact* of the project. It is important at this stage to ensure that these assumptions can be monitored since if these assumptions change, it may prevent you from achieving your expected outcome. If there are more than 3 assumptions please insert a row(s).

Assumption 1	The political situation in Madagascar does not affect project implementation.
Assumption 2	Natural disasters such as cyclones do not adversely affect the project.
Assumption 3	Agreements and management plans will be maintained by the communities. [We will aim to ensure some tangible benefits from year 1.]
Assumption 4	Agroforestry is shown to be economically viable and sustainable versus <i>tavy</i> within the period of the project. [We will place strong emphasis on increasing agricultural productivity and on marketing agroforestry products.]
Assumption 5	Communities continue to perceive the benefits of forest conservation. [We will promote sustainable utilisation of forest resources and domestication of wild species, along with a strong education programme.]
Assumption 6	Community forests are not overrun by landless immigrants. [We will work with the communities, immigrants and local authorities to develop solutions.]

Outputs

Outputs are the specific, direct deliverables of the project. These will provide the conditions necessary to achieve the Outcome. The logic of the chain from Output to Outcome therefore needs to be clear. If you have more than 3 outputs insert a row(s). It is advised to have less than 6 outputs since this level of detail can be provided at the activity level.

Output 1	Baseline data, monitoring systems and skills developed within COBAs/CFMs and extension workers for forest management, agroforestry and sustainable utilisation of natural resources.
Output 2	30 communities engaged in the conservation and sustainable utilisation of

	wild species with income generating potential.
Output 3	30 communities engaged in agroforestry with demonstration household plots managed under agreements with the project.
Output 4	30 communities engaged in forest restoration under agreements.

Measuring outputs

Provide detail of what you will measure to assess your progress towards achieving these outputs. You should also be able to state what the change you expect to achieve as a result of this project i.e. the difference between the existing state and the expected end state. You may require multiple indicators to measure each output – if you have more than 3 indicators please just insert a row(s).

Output 1	
Indicator 1	Monitoring system in place with simple metrics and baseline data on species ecology and vegetation, published in checklists/reports for Itremo and COFAV and available to COBAs and CFMs and other NGOs/projects.
Indicator 2	2 community technicians active in each COBA/CFM and able to teach households, implement management plans and monitor progress.
Indicator 3	Manuals for agroforestry, forest restoration and sustainable utilisation of key species produced for communities and forest managers.
Indicator 4	Itremo forest management plans agreed with communities and local forestry department.

Output 2	
Indicator 1	Management plans agreed for wild 5 species per community.
Indicator 2	Monitoring shows no decrease in wild populations at end of Year 3.
Indicator 3	50% increase in household incomes from natural products (e.g. silk, yams, essential oils, vanilla, bamboo, fuel and timbers) by end of Year 3.
Indicator 4	Peer-reviewed paper submitted for publication in a conservation and/or development journal on sustainable utilisation and economic benefits.

Output 3	
Indicator 1	Agroforestry agreements in place with 30 COBAs/CFMs.
Indicator 2	5 COBA/CFM managed household demonstration plots per community, with benefits shared by the community.
Indicator 3	100 households engaged in agroforestry per COBA/CFM by end of Year 3.
Indicator 4	Final workshop with MinEnvEF and Ministry of Agriculture and other conservation and development NGOs.

Output 4	
Indicator 1	Forest restoration agreements in place with 30 COBAs/CFMs.
Indicator 2	150,000+ tree seedlings raised in each community nursery.
Indicator 3	100 ha planted and maintained per COBA/CFM by end of Year 3.

Indicator 4	Summary reports accepted by PA management and evaluation committees.
-------------	--

Verifying outputs

Identify the source material the Darwin Initiative (and you) can use to verify the indicators provided. These are generally recorded details such as publications, surveys, project notes, reports, tapes, videos etc.

Indicator 1	COBA records.
Indicator 2	Project surveys and reports.
Indicator 3	Project blog and online photo library.
Indicator 4	Published checklists, reports and papers.

Output risks and important assumptions

You will need to define the important assumptions, which are critical to the realisation of the achievement of your outputs. It is important at this stage to ensure that these assumptions can be monitored since if these assumptions change, it may prevent you from achieving your expected outcome. If there are more than 3 assumptions please insert a row(s).

Assumption 1	30 communities work with the project and maintain interest.
Assumption 2	100 households undertake and maintain agroforestry per community.
Assumption 3	Populations of useful species are not already too depleted to utilise.
Assumption 4	Changes in the forestry laws or the political and economic situation affect the project or the communities.

Activities

Define the tasks to be undertaken by the research team to produce the outputs. Activities should be designed in a way that their completion should be sufficient and indicators should not be necessary. Any risks and assumptions should also be taken into account during project design.

Output 1	
Activity 1.1	Workshops with COBAs/CFMs towards project planning and agreements.
Activity 1.2	Recruit and train technicians.
Activity 1.3	Ground surveys of species, vegetation, soils and land use.
Activity 1.4	Remote sensing, GIS and data analysis.
Activity 1.5	Testing of monitoring methodologies.
Activity 1.6	Progress workshops with COBAs/CFMs.
Activity 1.7	Final workshop with national/regional planners and NGOs.

Output 2	
Activity 2.1	Training for technicians and householders.
Activity 2.2	Selection of species, surveys, collection/harvesting.
Activity 2.3	Domestication/enoblement trials
Activity 2.4	Training householders in processing/manufacturing products.
Activity 2.5	Production and marketing of products
Activity 2.6	Community evaluation, economic surveys and follow-up training.

Output 3	
Activity 3.1	Construction of tree nurseries (for Outputs 2, 3 and 4).
Activity 3.2	Training for technicians and householders.
Activity 3.3	Selection and collection of seeds, seedlings, cuttings.
Activity 3.4	Preparation, planting and maintenance of demonstration plots.
Activity 3.5	Community evaluation and follow-up training.

Output 4	
Activity 4.1	Training for technicians and householders.
Activity 4.2	Collection and propagation of seeds.
Activity 4.3	Preparation of sites (e.g. construction of fire-breaks).
Activity 4.4	Tree-planting with technicians and householders.
Activity 4.5	Post-planting management (e.g. weeding, clearing fire-breaks).
Activity 4.6	Community evaluation and follow-up training.

25. Provide a project implementation timetable that shows the key milestones in project activities.

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 Workshops with COBAs/CFMs for planning and agreements.	3	X	X										
1.2 Recruit and train 60 technicians.	3	X	X										
1.3 Ground surveys of species, vegetation, soils and land use.	12	X	X	X	X	X	X	X	X	X	X	X	X
1.4 Remote sensing, GIS and data analysis.	12	X			X			X	X			X	X
1.5 Testing of monitoring methodologies.	3				X				X				X
1.6 Progress workshops with COBAs/CFMs.	3				X				X				X
1.7 Final workshop with national/regional planners and NGOs.	1												X
Output 2													
2.1 Training for technicians and householders.	3	X	X										
2.2 Selection of species, surveys, collection/harvesting.	6	X	X	X	X								
2.3 Domestication/ <i>enoblement</i> trials	30			X	X	X	X	X	X	X	X	X	X
2.4 Training householders in processing/manufacturing products.	4				X	X							
2.5 Production and marketing of products	24				X	X	X	X	X	X	X	X	X
2.6 Community evaluation, economic surveys and follow-up training.	6			X	X			X	X			X	X
Output 3													
3.1 Construction of tree nurseries (for Outputs 2, 3 and 4).	6	X	X										
3.2 Training for technicians and householders.	3	X	X										
3.3 Selection and collection of seeds, seedlings, cuttings.	36	X	X	X	X	X	X	X	X	X	X	X	X
3.4 Preparation, planting and maintenance of demonstration plots.	30			X	X	X	X	X	X	X	X	X	X
3.5 Community evaluation and follow-up training.	3				X				X				X
Output 4													
4.1 Training for technicians and householders.	3	X	X										

20-020

4.2	Collection and propagation of seeds.	36	X	X	X	X	X	X	X	X	X	X	X	X
4.3	Preparation of sites (e.g. construction of fire-breaks).	4		X	X									
4.4	Tree-planting with technicians and householders.	10				X			X	X			X	X
4.5	Post-planting management (e.g. weeding, clearing fire-breaks).	12					X	X			X	X		
4.6	Community evaluation and follow-up training.	3				X				X				X

26. Project based monitoring and evaluation

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 projects monitoring and evaluation. 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. Monitoring and evaluation 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.

(Max 500 words)

The project management team will meet every 6 months and the responsibilities for monitoring and reporting will be as follows:

- RBG Kew – baseline surveys, vegetation monitoring, Itremo agroforestry
- FBM/NT – agroforestry products, livelihoods, COFAV agroforestry
- SNGF – tree nurseries and tree planting

In Itremo the project will coordinate with the protected area management committee, established by KMCC and including representatives of the COBAs and KMCC. Independent M&E will be provided by the protected area evaluation committee, which consists of representatives of local authority, including mayors and forestry officials.

In COFAV the project will coordinate with the CFMs established by Conservation International and FBM/NT. Independent M&E will be provided by local officials of the Ministry of Environment, Water and Forests (MinEnvEF).

The project management team will regularly review progress towards the outputs against the logframe, implementing any changes necessary based on progress and unanticipated changing conditions, opportunities or needs of the communities.

Agroforestry metrics will include: area, tree cover, households, number of crops, production (weight), proportion consumed or sold, market prices and fuelwood production.

Forest restoration metrics will include: seedling propagation, area planted, number of species, planting density and survival rate.

Agroforestry/forestry products metrics will include: numbers of households engaged in harvesting and production, production (weight/items), market prices and household income.

FBM/NT will assess livelihoods against baseline data, including health and education indicators as well as household income, access to sources of household income and access to productive land, using standard surveys and questionnaires familiar to the communities through previous work such as the yams and CI Nodes project. Quantative and qualitative data are recorded this way, via extension workers reports and beneficiary chosen fora, such as village meetings or individual interviews. Special provision is made for identified marginalised or under represented sectors of communities for example, women, single parent led families, landless, youth etc. Monitoring and evaluation reports are feedback to communities. Extension workers meet centrally each month to present reports and exchange ideas.

RBG Kew will use a combination of remote sensing and ground-truthing to monitor vegetation, standing carbon and land use change. We will also test innovative technologies, including (ground LiDAR) and community-implementable surveys using basic GPS equipped digital cameras.

At the end of the project we will publish a report of evaluating the impact of the project and its successes and failures as a case study for other projects and conservation managers. This will be disseminated through the final workshop and institutional websites. Appropriate results will be published in academic journals, such as Madagascar Conservation and Development.

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.

NB: Please state all costs by financial year (1 April to 31 March) and in GBP. **Budgets submitted in other currencies will not be accepted.** Use current prices – and include anticipated inflation, as appropriate, up to 3% per annum. The Darwin Initiative cannot agree any increase in grants once awarded.

27. 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)

The budget is based on experience of similar project work by the partners. The main unknown is the cost of establishing and stocking the tree nurseries and the post planting management required (high tree mortality will require repeat plantings in subsequent years). The number of communities proposed for the project was determined by the size of our estimated budget (all communities in Itremo are included) and their previous work with FBM/NT. Cost-effectiveness is ensured as all partners manage projects and have bases in and around Itremo and COFAV.

We have included rigorous efficiency elements using all existing resources such as vehicles and offices at minimal cost. We have excluded non-vital components which would be ideal but perhaps riskier, such as introducing wood working capacity building. We have minimised the international travel budget and will carry out much of the down-line management by Skype and email.

In 2005, FBM/NT won the World Bank International Development Marketplace Award for promoting the silk industry in the Itremo region. This project will be built on considerable foundations laid over the last 12-17 years.

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 the local UK embassy or High Commission 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**

I have been in contact with Tim Smart, the new UK Ambassador for Madagascar, and he knew of no new security issues. As RBG Kew and project partners maintain offices and staff in Madagascar we are particularly well informed of the risks.

CERTIFICATION 2013/14

On behalf of the trustees of

The Royal Botanic Gardens, Kew

I apply for a grant of **£263,344** 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 lead institution to submit applications and sign contracts on their behalf.*)

I enclose CVs for project principals and letters of support. Our most recent audited/independently verified accounts and annual report can be found at:

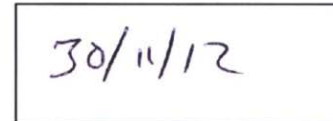
<http://www.kew.org/about-kew/our-work/annual-report-accounts/index.htm>

Name (block capitals)	Professor Tim Entwisle
Position in the organisation	Director of Conservation, Living Collection and Estates

Signed



Date:



Stage 2 Application - Checklist for submission

	Check
Have you provided actual start and end dates for your project?	✓
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 in the email)	✓
Have you included a 1 page CV for all the Principals identified at Question 7?	✓
Have you included a letter of support from the <u>main</u> partner(s) organisations identified at Question 10?	✓
Have you checked with the FCO in the project country/ies and have you included any evidence of this?	✓
Have you included a copy of the last 2 years annual report and accounts for the lead organisation? An electronic link to a website is acceptable.	✓
Have you read the Guidance Notes?	✓
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 midnight GMT on Monday 3 December 2012 to Darwin-Applications@ltsi.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.