Submit by 2359 GMT on Monday 29 January 2018

Darwin Initiative Application for Grant for Round 24: Stage 2

Before completing this form, please read both the Fair Processing Notice on pages 17 and 18 of this form and the Guidance . 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:	**Department of Plant Sciences, University of Oxford**
Address:	**South Parks Road**
City and Postcode:	**Oxford OX1 3RB**
Country:	**United Kingdom**
Email:	
Phone:	

2. Stage 1 reference and Project title

Stage 1 Ref: 4157	**Title: Conserving Rosewood genetic diversity for resilient livelihoods in the Mekong**

3. Summary of Project

Please provide a brief summary of your project, its aims, and the key activities you plan on undertaking. Please note that if you are successful, this wording may be used by Defra in communications e.g. as a short description of the project on GOV.UK. Please bear this in mind, and write this summary for a non-technical audience.

(78 words) Working with forestry authorities and rural communities in four Greater Mekong Subregion countries, the project will use *in situ and ex situ* methods to safeguard the genetic resources of three *Dalbergia* rosewood species of high conservation concern. Simultaneously we will develop novel, and strengthen existing, capacity for seed collection, seed source and nursery management, and associated value chain development. The project will build the capacity of rural households to generate livelihood benefits from sustainable use of these resources.

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 25%more than four countries.

Country 1: Cambodia	**Country 2: Laos**
Country 3: Vietnam	**Country 4: Thailand**

5. Project dates, and budget summary

Start date: 1/7/2018	**End date: 31/3/2021**		**Duration: 2 years 9 months**	
Darwin funding request (Apr– Mar)	**2018/19 £129,005**	**2019/20 £152,474**	**2020/21 £128,418**	**Total £409,897**
Proposed (confirmed & unconfirmed) matched funding as % of total Project cost				**32%**

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	**Boshier**	**Thea**	**Thammavong**
Forename (s)	**David**	**So**	**Bansa**
Post held	**Senior Research Associate**	**Deputy Director**	**Deputy Director**
Organisation (if different to above)		**Institute of Forest & Wildlife Research & Development, Cambodia**	**Forest Science Research Center, National Agriculture & Forestry Research Inst., Lao PDR**

Details	Project Partner 3	Project Partner 4	Project Partner 5
Surname	**Tran Thi**	**Changtragoon**	**Jalonen**
Forename (s)	**Hoa**	**Suchitra**	**Riina**
Post held	**Department Head**	**Expert on Forest Conservation Research**	**Scientist**
Organisation (if different to above)	**Forest Genetics & Conservation Dept, Center for Biodiversity & Biosafety, Vietnam Academy of Agricultural Sciences**	**Expert Office, Forest and Plant Conservation Research Office, Department of National Parks, Wildlife & Plant Conservation, Thailand**	**Bioversity International (Malaysia)**

Details	Project Partner 6	Project Partner 7	
Surname	**Zheng**	**Theilade**	
Forename (s)	**Yongqi**	**Ida**	
Post held	**Principal Research Scientist**	**Senior Researcher**	
Organisation (if different to above)	**Research Institute of Forestry, Chinese Academy of Forestry**	**University of Copenhagen, Denmark**	

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

Reference No	Project Leader	Title
DARSC180	Tim Coulson	Reptile farming as a sustainable contribution to global food security
440.12/04	Eleanor Jane Milner-Gulland	Building capacity for pro-poor responses to wildlife crime in Uganda
3142	Eleanor Jane Milner-Gulland	Can health investments benefit conservation and sustainable development
23-019	Eleanor Jane Milner-Gulland	Achieving no net loss for communities and biodiversity in Uganda
23-018	David Macdonald	Alleviating rural poverty through conflict mitigation and improved crop yields
21-009	Yadvinder S Malhi	Conservation through poverty alleviation enabling sustained yield forestry in Belize'

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)

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)
How is your organisation currently funded?	(Max 100 words)
Have you provided the requested signed audited/independently examined accounts?	Yes/No

8b. Do not complete if you answered 'Yes' to Question 7.

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

1. Title	**N/A**
Value	
Duration	
Role of organisation in project	
Brief summary of the	

aims, objectives and outcomes of the contract/award.	
Client/**independent** reference contact details (Name, e-mail, address, phone number).	

2. Title	
Value	
Duration	
Role of organisation in project	
Brief summary of the aims, objectives and outcomes of the contract/award.	
Client/**independent** reference contact details	

3. Title	
Value	
Duration	
Role of organisation in project	
Brief summary of the aims, objectives and outcomes of the contract/award.	
Client/**independent** reference contact details	

8c. Do not complete if you answered 'Yes' to Question 7.

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

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

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.

Lead institution and website:	**Details (including roles and responsibilities and capacity to lead the project): (191 words)**
Department of Plant Sciences, University of Oxford www.plants.ox.ac.uk	Responsible for leading the project, coordinating partner inputs and ensuring the timely execution of activities and delivery of outputs. Involved in original project conception at Bioversity-led workshop of the Asia-Pacific Forest Genetic Resources Programme (APFORGEN) (Malaysia, 03/2017) and subsequent proposal development. The department has a long and wide experience in leading projects across the world, including south-east Asia. It has successfully led many projects involving multiple partners across a number of countries. In particular it has led 10 Darwin Initiative projects (3029, 6046, 11010, 14004, 15023, 16004, EIDPO039, EIDPR004, EIDPR092, EIDPS017). David Boshier (see CV) has extensive experience in project leadership, forest genetic resources research, capacity building and knowledge exchange, ranging from community extension workers to university lecturers. He has been actively involved in development of community nurseries, seed collection and low cost vegetative propagation technologies. In particular he has a proven track record of ensuring research is translated into application on the ground. He has training and consultancy experience in Cambodia and China. John MacKay (see CV) brings expertise in genetics and genomics tools to focus on the adaptability, growth and development of trees and forests, with relevance for sustainable use of forest lands under changing conditions.
Have you included a Letter of Support from this institution? If not, why not?	Yes

Partner Name and website where available:	**Details (including roles and responsibilities and capacity to engage with the project): (152 words)**
Institute of Forest and Wildlife Research and Development, Forestry Administration, Cambodia www.irdfa.org	IRDFA envisions sustainable natural resources management through enhancing research and capacity building in research to all primary forest and wildlife stakeholders. Responsible for the implementation of activities in Cambodia for project outputs 1-3. The vegetative propagation method will be developed in Cambodia, and adapted and tested for community use in Cambodia, Laos and Vietnam. Involved in original project conception at Bioversity-led APFORGEN workshop (Malaysia, 03/2017) and subsequent proposal development through email and skype discussions. The Institute has been involved in a number of integrated research and development projects funded by a range of bilateral donors. It has experience as a partner in 3 Darwin Initiative projects (20014, EIDPO026, EIDPO030), demonstrating its capacity to fully engage with the project and follow its procedures.
Have you included a Letter of Support from this institution? If not, why not?	Yes

Partner Name and website where available:	**Details (including roles and responsibilities and capacity to engage with the project): (116 words)**
Forestry Research Center, National Agriculture & Forestry Research Institute (NAFRI), Ministry of Agriculture & Forestry, Lao PDR www.nafri.org.la	NAFRI is mandated to undertake integrated agriculture, forestry and fisheries research in the country, in order to provide technical knowledge and regulations and help formulate strategies for implementing related government policies. NAFRI has four main functions: carrying out adaptive research, developing methods and tools, providing policy feedback and coordinating and managing research. The FRC will be responsible for the implementation of activities in Lao PDR for project outputs 1-3. Involved in original project conception at Bioversity-led APFORGEN workshop (Malaysia, 03/2017) and subsequent proposal development through email and skype discussions. Has experience as a partner in 2 Darwin Initiative projects (13007, 14010)
Have you included a Letter of Support from this institution? If not, why not?	Yes

Partner Name and website where available:	**Details (including roles and responsibilities and capacity to engage with the project): (94 words)**
Forest Genetics and Conservation Center for Biodiversity and Biosafety, Vietnam Academy of Agricultural Sciences (VAAS) http://e.vaas.org.vn/	VAAS provides a comprehensive vision, strategic direction and oversight of Vietnamese agricultural R&D programs; conducts basic and applied research; fosters technology transfer of new technologies; and provides post-graduate and professional training. Hoa Thi Tran has relevant experience as Project Manager for developing Vietnam's National Biodiversity Strategy and Action Plan and Mainstreaming Biodiversity Conservation into Provincial Planning (NBSAP, UNDP-GEF). The Center will be responsible for the implementation of activities in Vietnam for project outputs 1-3. Involved in original project conception at Bioversity-led APFORGEN workshop (Malaysia, 03/2017) and subsequent proposal development through email and skype discussions.
Have you included a Letter of Support from this institution? If not, why not?	Yes

Partner Name and website where available:	**Details (including roles and responsibilities and capacity to engage with the project): (77 words)**
Forest Genetic Conservation and Biotechnology Research Division, Forest and Plant Conservation Research Office; Dept of National Parks, Wildlife and Plant Conservation, Thailand http://portal.dnp.go.th/p/ForestResearchOffice	The Department of National Parks, Wildlife and Plant Conservation Role is to conserve, promote and restore forest resources, wildlife and plants in forest areas purposed for conservation. The Division will be responsible for the implementation of activities in Thailand for project outputs 1-2. Involved in original project conception at Bioversity-led APFORGEN workshop (Malaysia, 03/2017) and subsequent proposal development through email and skype discussions. The department has experience as a partner in 2 Darwin Initiative projects (14024, EIDPR019)
Have you included a Letter of Support from this institution? If not, why not?	Yes

Partner Name and website where available:	**Details (including roles and responsibilities and capacity to engage with the project): (187 words)**
Bioversity International www.bioversityinternational.org	Bioversity International is a global research-for-development organization that envisions agricultural and tree biodiversity nourishing people and sustaining the planet. We deliver scientific evidence, management practices and policy options to safeguard and use agricultural and tree biodiversity to attain sustainable development goals. We work with partners in low-income countries where such biodiversity can contribute to improved nutrition, resilience, productivity and climate change adaptation. Bioversity is a CGIAR Research Centre. CGIAR is a global research partnership for a food-secure future. Riina Jalonen (Bioversity-Malaysia Office) will lead the project's socio-economic components (output 3), application of participatory and gender-responsive methods, and knowledge transfer and capacity building through APFORGEN. Involved in original project conception at Bioversity-led APFORGEN workshop (Malaysia, 03/2017) and subsequent proposal development through email and skype discussions. Marlene Elias, Gender Coordinator for the CGIAR Research Program on Forests, Trees and Agroforestry, has commented on the proposal's gender aspects. Dietmar Stoian, expert on value chains, has provided input to that part of the proposal. Bioversity is also a partner on the Chinese project on Dalbergia conservation (NSFC project, section 17b). Bioversity International is currently leading 2 Darwin Initiative Projects (22017, 23008).
Have you included a Letter of Support from this institution? If not, why not?	Yes

Partner Name and website where available:	**Details (including roles and responsibilities and capacity to engage with the project): (110 words)** The RIF is a public centre researching forest cultivation, tree genetics and breeding, forest ecology and management issues of importance at state and cross-region. It leads the collaborating National Science Foundation China funded project focussed on conservation of *Dalbergia* genetic resources in southern China (section 17b). It was involved in the original Darwin project conception at a Bioversity-led APFORGEN workshop (Malaysia, 03/2017) and subsequent proposal development through email. Zheng Yongqi is originator of the National Forest Genetic Resources Platform of China, a Regional Genetic Resources Training Centre and also Chair of the Asia Pacific Forest Genetic Resources Programme (APFORGEN), used for knowledge transfer and capacity building to other countries in the region.
Have you included a Letter of Support from this institution? If not, why not?	Yes

Partner Name and website where available:	**Details (including roles and responsibilities and capacity to engage with the project): (77 words)** Researchers from the University will provide advice and sharing knowledge on *Dalbergia*, with *ad hoc* contributions to the project, workshops and trainings as opportunities arise. Involved in original project conception at Bioversity-led APFORGEN workshop (Malaysia, 03/2017) and subsequent proposal development through email. Researchers from the University have been involved in Forest Genetic Resources research projects in SE Asia for many years. In particular they have recently published research on genetic diversity of *Dalbergia* (see CV of Ida Theilade)
University of Copenhagen, Denmark http://ign.ku.dk/english/	

Have you included a Letter of Support from this institution? If not, why not?	Yes (coming)

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. These should match the names and roles in the budget spreadsheet.

Name (First name, surname)	Role	Organisation	% time on project	1 page CV or job description attached*?
David Boshier	Project Leader	University of Oxford	20%	Yes
John MacKay	Advice on molecular technologies	University of Oxford	5%	Yes
So Thea	Project implementation (outputs 1-3)	Institute of Forest & Wildlife Research & Development, Forestry Administration, Cambodia	20%	Yes
Bansa Thammavong	Project implementation (outputs 1-3)	Forest Science Research Center, National Agriculture & Forestry Research Institute, Lao PDR	30%	Yes
Tran Thi Hoa	Project implementation (outputs 1-3)	Forest Genetics and Conservation Center for Biodiversity & Biosafety Institute of Agricultural Genetics Vietnam Academy of Agricultural Sciences	50%	Yes
Suchitra Changtragoon	Project implementation (outputs 1-2)	Dept. of National Parks, Wildlife & Plant Conservation, Thailand	25%	Yes
Riina Jalonen	Leader socio-economic components, participatory & gender responsive methods; knowledge transfer, capacity building with APFORGEN. NSFC project partner	Bioversity International	18%	Yes
Yongqi Zheng	Leader of China NSFC Dalbergia project. Chair,	Research Institute of Forestry, Chinese Academy of	5%	Yes

	APFORGEN Program, used for knowledge transfer & capacity building to other countries	Forestry		
Ida Theilade	*Dalbergia* genetics advice & knowledge sharing	University of Copenhagen	2%	Yes

11. Problem the project is trying to address

Please describe the problem your project is trying to address in terms of biodiversity and 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?

(300 words) Rosewood (*Dalbergia* spp.) is an extremely valuable timber. Over-exploitation has significantly reduced most species in their natural range, with rapid depletion of Siamese (*Dalbergia cochinchinensis*) and Burmese (*D. oliveri*) rosewoods in Cambodia, Laos, Myanmar, Thailand and Vietnam. Trees are largely restricted to protected areas, but illegal harvesting, even of roots, continues. Associated forest degradation compromises rural livelihoods (60-80% of population, except Thailand). Problems related to rosewoods were identified by national organizations (forestry, conservation, police). CITES CoP17 placed the *Dalbergia* genus on Appendix 2, imposing restrictions on international trade. IUCN identified a need to better define and understand conservation status through research on population size, distribution and trends. Across the Greater Mekong Subregion, country-identified limits to conservation efforts include: 1) limited capacity to generate livelihood benefits for and by local communities from forest restoration, 2) lack of information about remaining populations and their conservation value; 3) limited capacity and lack of cross-country collaboration to establish a network of conservation units that effectively conserves genetic diversity; 4) acute lack of *Dalbergia* planting material.

Community nurseries are popular in restoration, but livelihood benefits for women and men are constrained by lack of attention to seed sources, germplasm quality and market linkages. Research shows community nurseries and restoration of endangered species are particularly susceptible to genetic bottlenecks through poor collection practices. Low genetic diversity can lead to low seed production, reduced survival and growth, compromising both current and future use, conservation and adaptation.

Our approach is complementary to legal structures (national/international), ensuring *Dalbergia* genetic resources are conserved for the future while available and used by rural households. Illegal logging is associated with violence against government officials and local people and cannot be addressed for security reasons, though cross-country action on species conservation may facilitate greater collaboration to combat illegal trade in rosewoods.

12a. Biodiversity Conventions, Treaties and Agreements

Your project must support the objectives of one or more of the agreements listed below. Please indicate which agreement(s) will be supported and describe which objectives your project will address and how. Note: projects supporting more than one will not achieve a higher score.

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

12b. Biodiversity Conventions

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

(500 words) The project recognises that effective conservation and use of *Dalbergia* species require local and national actions complementing international agreements. Our *in situ/ex situ*, research and community-based activities (section 13) directly support CBD objectives at inter- and intra-species levels (CBD article 1): *conservation of biological diversity; the sustainable use of its components;* and (also Nagoya) *fair and equitable sharing of benefits arising out of the utilization of genetic resources,* through access to relevant technologies and funding. It follows CBD/COP13 guidance: ... *make use of native site-adapted species, giving attention to genetic variation within and among native species*…" (Decision XIII/5, Appendix I). Planting material choice is commonly driven by cost and availability, resulting in genetically limited germplasm, low native species diversity, and restored populations of compromised viability that neither contribute to species conservation nor genetic diversity. Consequently, forecast returns on restoration investments are often unrealised. The project develops practical solutions for enhancing diversity in community-led planting of endangered tree species (Aichi targets 1,12,13,15,19).

Project contributions are in line with partner countries' latest CBD National Biodiversity Strategy and Action Plans (NBSAP) as follows.

Cambodia: protect and recover threatened species (including tree genetic diversity) through *in-situ and ex-situ conservation*, needing to *identify and collect plant species … requiring protection, reproduction and propagation* (our outputs 1&2) with the status *of all threatened fauna and flora improved significantly by 2020*. Actions for Aichi Targets include community-based sustainable forest management *for biodiversity conservation, environmental protection, … more employment and supporting incomes of local communities* (our output 3).

Lao PDR: *implement priority protection measures for seed sources of indigenous tree species*, with the *extinction of at least 5 priority species effectively prevented through better law enforcement and in-situ/ex-situ conservation* (our outputs 1&2).

Vietnam: *improve the quality and populations of endangered, rare and precious species* (our outputs 1&2), promoting *use of native species for forest enrichment and restoration within REDD+*, developing *long-term investment plans in protected area buffer zones* and implementing *a sustainable economic development model for households* (our output 3). Priorities include *enhancing the rights and capacity of local communities so that they actively participate in biodiversity conservation*.

Thailand: *sustainable conservation and restoration of natural resources focuses on promoting communities' participation in reducing threats to biodiversity, encouraging in-situ and ex-situ species conservation, research and database development, … promoting activities relevant to restoration and utilization of biodiversity.*

CITES has no stated objective, but recognizes "*peoples and States are and should be the best protectors of their own wild fauna and flora; … that international co-operation is essential for the protection of certain species of wild fauna and flora against over-exploitation ...*" So the project will complement enforcement of *Dalbergia* CITES restrictions. Target species are naturally distributed across the region and project activities will benefit from: collaboration between countries, local community involvement in conserving the resources, researchers' experience from elsewhere in the world. Promotion of international cooperation in conservation and sustainable use of biodiversity are identified as solutions for implementation of NBSAPs and ASEAN's regional action plan on CITES (2011-15).

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

✓ **Yes** ☐ **No** **if yes, please give details:** During development of the proposal we have contacted CBD and CITES focal points in the four main partner countries. We have shared the proposal with them, invited them to comment and to support the proposal (included a letter of support from the Lao PDR CITES focal point). We have also developed an on-going dialogue with the British Embassy in Hanoi and Vietnam CITES Management Authority with respect to their proposal *Establishment of Southeast Asia Regional CITES Implementing Management Team* under the Illegal Wildlife Trade Challenge Fund 2017 Round 4. This programme is designed by the British Embassies in concert with CITES Authorities in the four countries. We have incorporated their suggestions, particularly for scaling-up impact from our project. In addition we have received letters of support from the British Embassy in Lao PDR and Global Trees Campaign (Fauna and Flora International) stressing the importance of our approach as a complement to National and International priorities and actions

12d. Global Goals for Sustainable Development (SDGs)

Please detail how your project will contribute to the Global Goals for Sustainable Development (SDGs).

(249 words) The project's actions directly contribute to three SDGs

SDG 1 *End poverty in all its forms everywhere.* Average household income in three of the seven project communities is estimated at ≤500 USD per year, below the international extreme poverty line of 1.90 USD per person per day. Project outputs are expected to result in ≥20% increases in the forest-related income of households participating in project activities by the end of year 3, while wider uptake over time will spread these benefits to larger numbers of communities (project outcome).

SDG 8 *Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.* Research and training activities under output 3 will provide the basis for improving business models of community based seed collection and nurseries, allowing for increased income. Nursery establishment and management activities target women, to increase their income earning opportunities and provide them with technical and management skills that help them gain respect and recognition among male household and community members. This links to ***SDG 1*** target of ensuring *all men and women, in particular the poor and vulnerable, have equal rights to economic resources.*

SDG 15 *Life on Land - Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss* and specifically its target *Take urgent and significant action to …, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species*. The project's *in-situ* and *ex-situ* activities will conserve threatened *Dalbergia* species and their genetic diversity, ensuring adaptability to climate change and human use. Increased capacity of local communities will also contribute to conservation of other native species through seed collection, nurseries and community planting across diverse land-use systems.

13. Methodology

Describe the methods and approach you will use to achieve your intended Outcome 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.).

(500 words)

The project will identify/implement feasible/effective combinations of *in-situ/ex-situ* approaches to better use and conserve at least three *Dalbergia* species. It will work through government agencies and local communities, integrating capacity building.

Materials and methods

1. Regional conservation status assessment of *Dalbergia cochinchinensis, D. cultrata, D. oliveri*

- Analyse conservation priorities, combining spatial information on distribution, protected areas, seed zones, collections, environmental variables, illegal logging and other threats
- Create a database on *Dalbergia* planting, multiplication efforts, use in habitat restoration, potential livelihood impacts of legal harvesting in plantings
- Study existing populations, collections, nurseries and plantings to identify genetic diversity patterns and losses (DNA markers)
- Understand (surveys, interviews, focus-groups) strengths/challenges of past centralized/decentralized conservation/multiplication efforts, and existing related capacities

2. Filling gaps to conserve *Dalbergia* genetic resources through *in-/ex-situ* programmes and provenance testing

- Identify potential new *in/ex situ* conservation areas and management strategies, using tree population characteristics, socio-economic data and results from 1.
- Regional and national workshops/trainings on; i) establishing & managing *ex situ* collections, ii) *in situ* conservation and management, including community-based approaches for both
- Regional provenance trials to study *D. cochinchinensis* across ecological zones.

3 Multiplication to support use, income generation and reduced pressure on natural *Dalbergia* populations

- Develop vegetative propagation protocol for *D. cochinchinensis* to maintain availability in poor seed production years and facilitate production scaling-up (accessible technology, tested in 5 community nurseries).
- Identify opportunities for community-based organisations to gain income from the production and delivery of quality *Dalbergia* seed and seedlings for state-owned and private tree nurseries, by analysing barriers to both supply and demand.
- Strengthen technical and organisational capacities of community-based groups for seed production and delivery: Training and training materials on seed collection, germplasm tracking to ensure diversity, nursery management, vegetative propagation, related business skills; based on an analysis of current practices and motivations for their use.

Participatory and gender-responsive methods will be used throughout the project to understand needs, interests and priorities for *Dalbergia* conservation and use by different social groups, guiding field activities' design. See section 15 (Gender) for more detail

Roles and responsibilities (for details of partners' roles: see sections 9&10)

Oxford University: The project lead (David Boshier) has extensive experience (research, capacity building, policy advocacy) on conservation genetics and communication on native tree species in rural communities. He will provide guidance and materials for capacity building. John MacKay will advise on molecular technologies.

Project management tools: inception workshop, monthly updates, quarterly reviews, planning meetings with designated national coordinators. Use of email, conferencing tools to ensure frequent and timely communication with partners. Reports circulated to partner institutions. Implementing partners will keep a project activities log and share brief bi-weekly updates for continuous evaluation of progress and sharing experiences. Project leader and co-leader will have monthly review and planning calls with each project partner. Progress and results widely shared through the APFORGEN website and network to extend the scale of benefits and ensure maintenance beyond the project life. Use of messaging apps (e.g. whatsapp) will be explored for target areas where internet connectivity is problematic.

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 (i.e. during the life of the project) and b) in the long-term (after the project has ended). Please describe the changes for biodiversity and for people in developing countries, and how they are linked. When talking about people, please remember to give details of who will benefit and the number of beneficiaries expected. 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.

(497 words) Involvement and capacity strengthening of secure government agencies, rural households and community-based organisations will ensure a lasting legacy that will realise most or all of the following expected changes. Each change is identified as related to *Biodiversity* and/or *People* in parenthesis.

a) *Short-term*

i) Forest authorities (3-5 countries) acquire and begin to apply (*People change*) new methods, tools, capacity and enhanced collaboration in:

- identification of genetic conservation priorities and feasible strategies for 3 threatened species (50% increase in designated *Dalbergia* conservation units across project countries; new for some species and/or countries) (*Biodiversity change*)
- *Dalbergia* multiplication methods and material for plantation and restoration (*Biodiversity change*)
- Meaningfully engaging rural households and community-based organisations in conservation and restoration through the ability to help them generate livelihood benefits from these activities (*People change*)

ii) Women and men in 175 households across 7 local communities will materially benefit (*People change*) from:

- strengthened community-based organisations (emphasis on participation and agency of women/marginalised groups); progress towards equitable participation and benefit sharing from tree genetic resources (*People change*)
- improved skills (*People change*) in collection, propagation and marketing genetically diverse, quality *Dalbergia* germplasm, reflected in better seedling survival and growth. Skills are also broadly applicable to other species (*Biodiversity change*).
- identification and development of new and equitably shared income sources from community-based nurseries and seed enterprises, resulting in a 20% increase in households' forest-related income by the end of the project and growing as seed production from planted trees starts (5-10 years after planting) (*People change*)

b) *Long-term*

- Development and implementation of vegetative propagation make the planting material supply more reliable, benefitting livelihoods of all groups (*People change*) planting this species (technique may also be applicable to other *Dalbergia* species)
- Improved availability of quality, genetically diverse seed for planting and restoration results in increased success of programmes (*People change*), and improved ecosystem services from restored forests (*Biodiversity change*). Improved collection and genetic conservation may also be applied to other indigenous tree species (*Biodiversity change*)
- Community-based nurseries and seed enterprises receive customer recognition (public/private planting programmes) for quality material, expanding income opportunities (*People change*). Methods and approaches scaled out to new communities (*People change*) and species (*Biodiversity change*)
- *Ex situ* stands provide more regular and easily collected seed supply for community based seed enterprises (*People change*)
- Provenance trial results help plan/implement site matching of adaptable/pre-adapted seed for restoration under climate change – 10-25% improvements in survival and growth (*Biodiversity change*). Countries may initiate similar trials on other species (*Biodiversity change*)
- Other Asian countries and their communities benefit from sharing project methods, tools, knowledge, training and experiences (*People change*) for adaptive management of FGR, to help meet CBD, CITES commitments (*Biodiversity change*)
- Cross-country collaboration on rosewood conservation may facilitate greater control (*People change*) helping strengthen efforts to reduce illegal cross-border trade in these species (*Biodiversity change*)
- Community planting of *Dalbergia* will not increase illegal logging as trees take 30-40 years to reach merchantable size, while seed production is expected from 5-10 years providing

an alternative, larger income source (*People change*)

15. Gender

All applicants must consider whether and how their project will contribute to reducing inequality between persons of different gender. Explain how your project will collect gender disaggregated data and what impact your project will have in promoting gender equality.

(278 words) The project aims to increase participation of marginalised social groups – particularly women, but also ethnic minority groups – in the management of high-value tree species, decision making and benefit sharing. Project communities are rural and consist mainly of two ethnic minority groups (Hmong in Vietnam, Kha-Mhou in Lao), and one majority group (Khmer in Cambodia). Gender roles among these communities are traditional, with male household heads as the main decision-makers regarding extra-household matters. Women's opinions are less respected, although they have important roles and some decision-making power for intra-household matters.

The project design is gender-responsive and sex-disaggregated data will be collected on all topics with a human dimension. Main methods are household surveys (male and female household heads), interviews (male and female informants) and participatory methods (sex-disaggregated groups). Participatory activities aim to develop shared understanding of the distinct, but complementary, knowledge and skills of gender groups and their contributions to project-related activities. Timing and venues for data collection, training and community meetings will be planned to encourage women's participation. Attention will also be paid to other forms of social segregation, e.g. ethnicity, wealth/land ownership, and their interaction with gender. These will be considered in household surveys, other data collection and analysis where relevant.

The project aims to increase incomes through collection and sale of *Dalbergia* seed, and seedling production and sale from community-nurseries. Seed collection is considered less suitable as income generation for women given it requires mobility, as well as climbing trees. By contrast, women would be well placed to be actively involved in nursery production as an activity within the village, so related trainings will target them. Project related work burdens, especially for women, will be carefully considered.

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?

(200 words) The sustainable exit strategy is based on two principles: people support what they help to create, and sustained livelihoods catalyse sustained conservation efforts. The project addresses a gap in policy implementation and an expressed need by government officials in the project countries, has been co-developed, and will be implemented, in collaboration with them, as well as with input from other stakeholders (section 12c). Within communities, the project works with existing institutions and community-based organisations, strengthening them and emphasizing continuity rather than creating new ones. At the project's end, a proof-of-concept exists for community-based conservation and seed production strategies that generate additional income for rural households. Moreover, beneficiaries will have new capacities to identify new market linkages and adapt business plans as production and demand grow, applying the methods to other marketed products. Forest authorities' participation in development of the training materials, their adaptation to local socio-ecological contexts and providing training to community members and nursery managers (state-owned, private sector), ensures they are equipped to expand the approaches to other communities in line with the project outcome. APFORGEN provides a framework for continuing regional collaboration, and the network is strengthened through the experiences and partnerships forged by the project.

17a. Harmonisation

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

(164 words) The project is a new initiative but arises from and contributes to the activities of the regional network APFORGEN. National Coordinators of the member countries selected species conservation and seed production strategies as objectives in the network's new 5-year strategy (see www.apforgen.org). Moreover, they selected *Dalbergia* as one of three priority genera on which they want to develop collaborative research and conservation strategies, identify synergies and address gaps for more effective conservation outcomes and use of limited resources. Networking activities on *Dalbergia* are currently funded only through in-kind contributions (staff time) of the National Coordinating institutions and Bioversity International.

Strengthening community participation in biodiversity conservation is a stated policy goal of each country partner, however, limited progress has been made on this front, partly because of a lack of tangible incentives for local forest-dependent communities. The project will be implemented within the framework of National Forest Policies and National Biodiversity Strategies and Action plans, to support existing efforts and targets in the project countries.

17b. Are you aware of any other individuals/organisations/projects carrying out or applying for funding for similar work? Yes

If yes, please give details explaining similarities and differences. Explain 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.

The project will link closely with two recently funded projects to produce a greater impact for output 1. As such this represents a timely opportunity to build capacity and conserve FGRs for *Dalbergia* in the region before it is too late.

1) a project on *Dalbergia* genetic resources in southern China, coordinated by the Chinese Academy of Forestry. Our Darwin Initiative proposal has been developed in conjunction with CAF, in the original project conception at a Bioversity-led APFORGEN workshop (Malaysia, 03/2017) and since, via email, to ensure the two projects' work complement each other

2) a 2 year, Bioversity International led, project "Filling the knowledge gaps for genetic conservation of priority tree species in Asia", which started in December 2017 to develop and make available distribution and basic threat maps for 50 regional priority species.

Our Darwin Initiative proposal will collect detailed data on the distribution and threats for the 3 *Dalbergia* species across the project countries. It will benefit from the Bioversity 'Gaps' project's expertise in GIS, threat analysis and latest modelling methods, to feed spatial analysis results into national and regional conservation planning. The project will also benefit from additional distribution data on *Dalbergia* species from Burma and China. As such, and with its specific links to use, the *Dalbergia* maps and predictions will represent 'best practice'.

18. Ethics

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

(298 words) The project arose from the expressed needs of the country representatives of APFORGEN, and all current partners have participated in its development since the beginning (the regional project development workshop in March 2017). Free and Prior Informed Consent (FPIC) will be sought from participants in the project communities as a standard practice. Project activities will be refined through participatory and gender-responsive methods to match the beneficiaries' needs and interests. These activities will also seek to identify and integrate traditional ecological knowledge, for example on species' phenology, propagation and growth requirements, so as to support conservation and multiplication and to gain recognition for the custodian role of local communities and indigenous peoples.

University of Oxford will develop Letters of Agreement with each partner to lay out the basis for the project collaboration. These will include legal, ethical and human rights obligations in the

UK and project countries, with core principles such as integrity, and intellectual property rights of both partners and beneficiaries. The University has vast experience in the development of such agreements, while Bioversity International has researchers trained in Human Research Ethics who can advise.

It is the policy of the University of Oxford to ensure that all members of the University and its staff are aware of their individual responsibility to exercise care in relation to themselves and those who work with them. To this end individuals are required to familiarise themselves with University Safety Policy and any departmental safety requirements, take reasonable care that all procedures used are safely carried out, and seek expert advice in any case of doubt. For safety reasons, the project will not attempt to directly address illegal logging, as it has been associated with violence against government officials and local people (See Section 11).

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 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?

(300 words) Policies for enabling and encouraging community-based conservation awareness and actions exist in target countries, but are not widely implemented. Awareness of the importance of seed quality for restoration success is low, especially among other natural resource management sectors, private enterprises and rural communities. Implementing a multi-media communications plan, the project will raise awareness among:

1) Forest and conservation authorities
   - providing up-to-date information on the distribution-wide conservation status of *Dalbergia* species, to help develop more effective conservation strategies
   - demonstrating field approaches for involving community-based organisations and rural households in conservation and restoration initiatives, and ways to generate participation incentives (monetary and other), to encourage use of such approaches, increase their benefits to rural households; helping to sustain initiatives.

   Products include: number of conservation professionals trained; policy paper on conservation priorities, strengths and challenges; conservation units, and vegetative propagation method.

2) Members of ≥175 households in 7 communities across 3 countries
   - demonstrating the importance of seed genetic quality, to increase survival/growth of seedlings, and demand for quality seed. This is particularly important given community members' growing interest in tree planting, which can result in mass distribution of seed from very limited numbers of easily accessible trees
   - helping them identify and develop market linkages for seed/seedlings to generate additional income

   Products include: number of trained community leaders (women and men), nurseries and seed businesses with identified market linkages, and good seed collection practices

To scale-up the project's impact and benefits from lessons learned, we will reach out to:
- private sector nurseries to raise awareness of the importance of genetic quality and community-based seed production
- forest and conservation authorities in other APFORGEN countries, to share approaches and foster collaboration
- development/conservation NGO's active in project countries, to demonstrate the approaches, encouraging adoption and dissemination in their projects

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.

(294 words) The project strengthens women's and men's capacities in conservation planning, germplasm production and supply at both individual and institutional levels in line with national

forestry and biodiversity policies and strategies for implementation of Aichi and other targets. Capacity building of national and local forestry and environmental authorities and extension services, will provide methods and approaches for the conservation of *Dalbergia* and genetic resources more generally. It will also strengthen the role of local communities in conservation and seed production.

Technical training is provided to at least 50: forestry and environment officers, staff of state-owned and private sector nurseries. Representatives of 175 households in 7 communities will be trained in seed collection, production and marketing. The project proactively encourages participation in trainings of female professionals with relevant backgrounds to redress gender imbalances. Nursery production training targets women, with training times and venues planned to facilitate their participation. Methods, approaches and training materials will be developed and tested in collaboration with intended users to facilitate their application and adaptation to other socio-ecological contexts and species to secure future capacity. Trainings will be based on assessments of current knowledge, practices and attitudes of target audiences related to each topic, with assessments repeated after training and results fed into the monitoring process.

Capacities of existing community-based organisations (e.g. community forestry committees, farmers and women's groups) will also be strengthened by training in organisational and financial management skills, enabling them to work effectively with other community members and external agents (e.g. state owned/private nurseries, extension workers). Women's participation in these trainings is particularly important as it will enable them to contribute valuable skills to the organisations and strengthening their ability to participate in decision-making.

Where opportunities arise capacity building will include formal training *via* PhD/MSc/BSc projects for staff/local/regional students.

21. Access to project information

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

(247 words)
Project outputs include:

a) distribution and threat maps (indicator 1.1)
b) national and regional databases covering *in-situ* reserves, *ex-situ* collections 1.2; provenance trials 2.4
c) methods, approaches and training materials on: complementary *in-situ/ex-situ* conservation strategies 2.2, vegetative propagation 3.1 germplasm supply genetic bottlenecks 3.3/3.4, participatory market appraisals for germplasm supply chains 3.5
d) scientific publications, related policy papers/briefs on: population genetics gaps and conservation priorities 1.3/1.5; community-based germplasm production strategies 3.2

Outputs will be freely available on-line whenever possible. Exceptions are: 1) specific locations of individual *Dalbergia* trees, as sharing could facilitate illegal logging. Raw data and detailed information will be held by national authorities, with only aggregated information published. 2) Data from communities, including traditional knowledge, is subject to informants' intellectual property rights. Original data will be held by community-based organisations as agreed in each case, with only aggregated information published. Intended use and data distribution are explained to and agreed with community members during the FPIC process. Letters of Agreement with project partners will cover data sharing arrangements and intellectual property rights.

The communication strategy will describe detailed strategies for disseminating outputs to defined target audiences. Project budget includes £1500 for open-access publication (possible target journals and charges: Ecology and Society US$975, Enterprise Development & Microfinance GBP650, Conservation Letters GBP1160). If funds are not available for publishing in open-access journals beyond the project finish, we will publish in journals where authors may deposit copies of final approved manuscripts on sharing websites to allow free access.

Project Monitoring and Evaluation

Measuring Impact

22. Logical Framework

Darwin projects will be required to report against their progress towards their expected Outputs and Outcome if funded. This section sets out the expected Outputs and Outcome 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
Impact: Enhanced conservation and sustainable use of Rosewood genetic resources, for improved livelihoods and ecosystem services for thousands of rural people across ≥5 Mha of forest landscapes in the Mekong Subregion (30 words)			
Outcome: Forest authorities in four countries collaborate to conserve genetic resources of endangered *Dalbergia* species *in-* and *ex-situ*, while rural households increase their capacities to generate livelihood benefits from these resources (30 words)	0.1 At least 50% increase in number of designated *in situ/ex situ Dalbergia* conservation units across 4 countries (new for some countries or species) 0.2 At least 20% increase in forest-related income of 175 rural households in 3 countries (end year 3), through *Dalbergia* seed/seedling production and planting 0.3 Methods and training materials for conservation, multiplication and value chain development exist and >100 professionals and 175 rural households trained to use and adapt them to enable scaling out	0.1 *In/ex situ* conservation records and site visits 0.2 Project baseline and external impact assessment end year 3 (by country, years; sex-disaggregated) 0.3 Availability of methods and training materials; training reports; evaluation of changes in technical and institutional capacities (external impact assessment end year 3)	• Records, baselines and surveys available and accurate • Forestry authorities implement the recommendations they co-developed through the project • No major socio-economic changes (policy, tenure, outmigration rates etc) or natural catastrophes in project sites that would limit community-based conservation activities • Regular fruiting of Dalbergia in target communities during project period • More trained people and enhanced collective action will help safeguard threatened *Dalbergia* spp long-term • More comprehensive conservation leads to wider use and improved rural/forest-related livelihoods
Outputs: **1**. Regional assessment of the conservation status of *Dalbergia cochinchinensis, D. oliveri* and *D. cultrata*	1.1 Subregion distribution & threat maps for 3 *Dalbergia* spp. overlaid with existing seed zones, forest cover, climate predictions, threats, etc. 1.2 Subregion database of existing *in situ* reserves and *ex situ* collections for 3 *Dalbergia* spp. species (incl. seed sources, molecular data, environmental data, threats) 1.3 Identified population genetics gaps	1.1 Availability of maps 1.2 Availability of database 1.3/1.4 Policy paper, 1 research paper	• Access to existing information, records • Available information relates to actual status on the ground, or status can be estimated based on available data and trends • Participants in past initiatives willing to share experiences, including areas for improvement • DNA methodology developed for *D.*

	in seed collections and existing materials 1.4 Identified *in situ/ex situ* conservation priorities for 3 *Dalbergia* spp. at national and Subregion levels across 4 countries.		*cochinchinensis/D. oliveri* transferable to *D. cultrata*
2. Filling gaps to conserve *Dalbergia* genetic resources through *in situ*, *ex situ* programmes and provenance testing	2.1 At least 25 new *in situ/ex situ* conservation units for 3 *Dalbergia* spp across 4 countries (units may overlap between species) 2.2 60 forestry and conservation officers across 4 countries trained in *in situ/ex situ* conservation strategies for *Dalbergia* 2.3 At least 15 new, coordinated seed collections for 3 *Dalbergia* spp. across 4 countries 2.4 Regional/national provenance trials established to study adaptation of *D. cochinchinensis* (4 sites, 8 provenances across 4 countries)	2.1 Records of units designated, site visits 2.2 Training reports/participant feedback (sex-disaggregated data) 2.3 Seed collections made and stored, report on populations/collections genetic diversity (1 publication) 2.4 Provenance trials, (design, plants grown in nurseries, sites prepared, actual establishment near or after project end)	2.1 Willingness of authorities to designate *in situ* conservation units 2.3 Sufficient trees produce enough seed for representative viable samples. Collecting permits granted by forest and other land owners. 2.4 Sites available for trials. Regional or national depending on seed exchange possibilities. Sites well managed and representative of conditions/contexts All: Gaps can be filled
3. Multiplication to support use, income generation and reduced pressure on natural populations (propagation strategies, community nurseries etc)	3.1 *D. cochinchinensis* vegetative propagation method available & successfully used in government-owned and community nurseries 3.2 Recommendations for overcoming the barriers to community-based seed and seedling supply for government-driven and private sector tree planting programmes, based on a review of at least 3 programmes in each sector (total for Lao and Cambodia) 3.3 50 staff of government-driven and private sector tree planting programmes trained on the importance of good quality diverse germplasm, and options to source germplasm from community-based enterprises (25 Lao, 25 Cambodia) 3.4 175 households in 7 communities (2 Cambodia, 3 Lao, 2 Vietnam) trained in	3.1 availability of protocol; successful propagation of diverse genotypes 3.2. Policy paper on recommendations; records of surveys, interviews, focus group discussions with programme staff and community members (sex-disaggregated data) 3.3 Availability of survey results and training materials; reports of trainings; post-training survey/evaluation. 3.4 Records of surveys of current practices; availability of training materials and training reports (sex-disaggregated data); M&E report 3.5 Institutions in place; results of participatory assessments (sex-disaggregated data); training records (sex-disaggregated data); nursery reports; visits to facilities; availability of business plans; partnership or sales	3.1 Availability of seed/plants to develop vegetative propagation 3.2 Interest and active collaboration from programme staff (to be facilitated by project partners) and community members 3.3 Training participants from programmes are able to influence seed sourcing practices in their organisations; & are willing to try community-based seed sourcing approaches as long as any concerns they have are addressed 3.4 Community members show interest toward the training topics. Male household members persuaded to allow women participate in trainings 3.5 Interest and active collaboration of community-members; some prior experience in collective action to facilitate implementation of field

	good practices in seed collection, seed source management and/or propagation methods, incorporating documenting & sharing of traditional knowledge (at least 30% women) 3.5 175 households involved in community-based seed collection business (7 communities) and operating community nurseries (4 communities, capacity 10,000 seedlings per year from year 3 onwards) 3.6 Number of households planting *Dalbergia* on their farmland increased by 30% in 4 communities by year 3 (*indicator may be reviewed after baseline is established; lack of up-to-date data*)	agreements; evidence of FPIC process 3.6 Survey reports (sex-disaggregated data at intra-household level); documentation of networks; strategies available	activities; women are allowed to participate in the activities and willing to do so as long as they fit in their daily routines and workload stays manageable. Availability of seed 3.6 Tenure is secure and socio-economic and environmental conditions are relatively stable to enable investments in planting
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) 1.1 Develop agreements on data sharing, database management and updating to ensure continuity and confidentiality where relevant (FPIC in communities) 1.2 Collect georeferenced data on species occurrence, seed zones, forest cover, climate predictions, existing *in situ* reserves and *ex situ* collections, strengths and weaknesses of past conservation initiatives, technical and institutional capacities (review, key informant interviews, incl. community actors, gender representation) 1.3 Prepare distribution and threat maps using database and ecological niche modelling 1.4 Validate maps and models through expert consultation 1.5 Develop database structure 1.6 Populate database with collected data 1.7 Identify conservation priorities through comparison of distribution, threat & socio-economic data, existing collections, strengths of past initiatives 2.1 Identify locations for conservation units in collaboration with stakeholders and between countries, to ensure sustainability and complementarity 2.2 Develop institutional arrangements and management guidelines, including material transfer agreements for regional trials 2.3 Develop and translate training materials, based on assessment of capacities (1.2) and new conservation strategies (2.2) 2.4 Organise and run trainings 2.5 Design and conduct seed collections among country partners 2.6 Establish provenance trials 2.7 Evaluate progress and changes in knowledge and practices and communicate lessons learned 3.1 Develop *D. cochinchinensis* vegetative propagation method (Cambodia) 3.2 Test *D. cochinchinensis* vegetative propagation method in other countries and *Dalbergia* spp. 3.3 Develop guidelines for appropriate use to multiply genetically diverse planting material 3.4 Analyse current practices for seed and seedling sourcing in ≥3 state-owned and ≥3 private sector nurseries, knowledge of seed quality and genetic diversity among programme staff, and their attitudes to community-based seed supply			

3.5 Identify strengths and weaknesses in communities' current seed collection practices, seed exchange networks, market linkages, tree planting, community-level institutions, capacities and traditional knowledge (7 communities in 3 countries), including income generated from seed and seedling sales
3.6 In collaboration with stakeholders, formulate strategies for overcoming identified barriers, with recommendations and training materials for their implementation
3.7 Conduct 2 trainings on improving germplasm quality and community-based seed sourcing approaches for government and private sector nurseries
3.8 Train and mentor community members in good seed collection practices, propagation (including vegetative propagation), tree nursery management, developing business plans and pursuing market linkages (7 communities in 3 countries)
3.9 Evaluate changes in seed production and value chains between communities and government and private sector nurseries, communicating lessons learned

The following activities are linked to the overall project outcome, covering all outputs
M & E 1 Inception workshop: update logframe, clarify measurement and report methodology and its implementation; team building
2 M&E Steering Committee meetings
3 Final workshop
Exit 4 Outreach and translation workshops in partner countries

23. 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 (starting from Q2 July 2018)

Please add/remove columns to reflect the length of your project. For each activity (add/remove rows as appropriate) indicate the number of months it will last, and shade only the quarters in which an activity will be carried out. The workplan can span multiple pages if necessary.

	Activity	No. of months	Year 1			Year 2				Year 3			
			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Output 1	Regional assessment of the conservation status of *Dalbergia cochinchinensis, D. oliveri* and *D. cultrata*												
1.1	Develop agreements on data sharing, database management and updating to ensure continuity and confidentiality where relevant (FPIC in communities)	3	X										
1.2	Collect georeferenced data on species occurrence, seed zones, forest cover, climate predictions, existing *in situ* reserves and *ex situ* collections, strengths and weaknesses of past conservation initiatives, technical and institutional capacities (review, key informant interviews, incl. community actors, gender representation)	6	X	X	X								
1.3	Prepare distribution and threat maps using database & ecological niche modelling	2			X								
1.4	Validate maps and models through expert consultation	2				X							
1.5	Develop database structure	4		X	X								
1.6	Populate database with collected data	2				X							
1.7	Identify conservation priorities through comparison of distribution, threat & socio-economic data, existing collections, strengths of past initiatives	6					X	X					
Output 2	Filling gaps to conserve *Dalbergia* genetic resources through *in situ, ex situ* programmes and provenance testing												
2.1	Identify locations for conservation units in collaboration with stakeholders & between countries, to ensure sustainability & complementarity	8					X	X	X				
2.2	Develop institutional arrangements and management guidelines, including material transfer agreements for regional trials	6	X	X									
2.3	Develop and translate training materials, based on assessment of capacities (1.2) and new conservation strategies (2.2)	12			X	X	X	X					
2.4	Organise and run trainings	6						X	X				
2.5	Design and conduct seed collections among country partners	6		X				X				X	

2.6	Establish provenance trials	4									X	X	
2.7	Evaluate progress and changes in knowledge and practices and communicate lessons learned	30		X	X	X	X	X	X	X	X	X	X
Output 3	Multiplication to support use, income generation and reduced pressure on natural populations (propagation strategies, community nurseries etc)												
3.1	Develop *D. cochinchinensis* vegetative propagation method (Cambodia)	18	X	X	X	X	X	X					
3.2	Test *D. cochinchinensis* vegetative propagation method in other countries and *Dalbergia* spp.	15						X	X	X	X		
3.3	Develop guidelines for appropriate use to multiply genetically diverse planting material	8								X	X	X	
3.4	Analyse current practices for seed & seedling sourcing in ≥3 state-owned & ≥3 private sector nurseries, knowledge of seed quality & genetic diversity among programme staff, & their attitudes to community-based seed supply	4		X	X								
3.5	Identify strengths & weaknesses in communities' current seed collection practices, seed exchange networks, market linkages, tree planting, community-level institutions & capacities (7 communities in 3 countries), including income generated from seed & seedling sales	6		X	X								
3.6	In collaboration with stakeholders, formulate strategies for overcoming identified barriers, with recommendations & training materials for their implementation	8			X	X	X						
3.7	Conduct 2 trainings on improving germplasm quality & community-based seed sourcing approaches for government and private sector nurseries	2				X							
3.8	Train & mentor community members in good seed collection practices, propagation (including vegetative propagation), tree nursery management, developing business plans & pursuing market linkages (7 communities in 3 countries)	20				X	X	X	X	X	X	X	
3.9	Evaluate changes in seed production & value chains between communities & government & private sector nurseries, communicating lessons learned	6					X			X			X
M & E	Inception workshop: update logframe, clarify measurement and report methodology and its implementation, team building	2	X										
	M&E Steering Committee meetings	5		X		X		X		X			X
	Final workshop to review and discuss all monitoring and reporting	2											X
Exit	Outreach and translation workshops in partner countries	2											X

24. 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.

(494 words) Responsibility for M&E lies with the project's Steering Committee. With the log framework as the central tool, a detailed M&E plan and reporting mechanism will be developed collaboratively at a project-wide inception workshop held in a Mekong country, to ensure a shared understanding of roles, responsibilities and expectations. The Steering Committee will work towards a culture of learning (encourages sharing and reflection of positive and negative experiences) to maximise learning opportunities from the diverse contexts and experiences of the multi-country project. A final project-wide workshop at Q4 of year 3 will ensure completion of all M&E activities.

The Steering Committee will establish an M&E advisory group consisting of one representative of Oxford, all countries where field activities are implemented, Bioversity International and University of Copenhagen. The Committee will meet (remotely) at least every 6 months to review project progress and emerging results, providing recommendations to the Steering Committee. Members will not be directly involved in the implementation of project activities.

Project baselines will be verified/established at the project inception workshop. Information on existing conservation areas, tree planting and seed sourcing approaches by state-owned and private nurseries will be confirmed through interviews, records, documents and field/site visits and is relatively easily available and verifiable. By contrast, community/household level information is currently not accurate enough for monitoring project impacts; therefore, detailed baseline data will be collected to enable adjusting activity plans for local contexts and assess the need for changes to indicators during the project.

Attention in M&E will be to:

- Validity of distribution and threat maps based on evaluation by regional experts, and utility for conservation planning, evaluated by forest and environment authorities (indicator 1.1)
- Completeness and user-friendliness of *in-situ* and *ex-situ* databases, the quality of data management and financing plans for keeping up-to-date (1.2)
- Scientific quality of DNA marker studies for identifying germplasm collection gaps (1.3)
- Methodology, diversity and representativeness of informants, richness of data collected for identifying conservation priorities and increasing community participation in seed supply (1.4-1.5,3.2)
- Acceptance of recommendations as evaluated by stakeholder groups, including marginalised social groups, and impacts on their ability to participate, influence and benefit from management decisions (1.4-1.5,3.2)
- Ability to attract trainees who can influence decision-making in their organisations; post-training effectiveness and sustainability of actions taken to improve seed sourcing (3.3)
- Gender-responsiveness and social equity in the design of community institutions, meetings, trainings, seed/seedling production activities, and actual participation and perceptions of women, ethnic minorities and lower income groups (3.4-3.5)
- Quality and evaluated sustainability of business plans; organisational and financial management capacities of community organisations; diversity of market linkages, and gendered participation in their preparation and implementation (3.5)
- Access to and control of land and tree resources within and between households; extent of good seed collection practice and documenting seed sources; extent of seed exchange networks within and between communities and the diversity of people involved in these activities (gender, ethnicity, wealth) (3.6)
- household income derived from project activities, variation between years and intra-household decision-making in its distribution

Number of days planned for M&E	66
Total project budget for M&E	£26,000
Percentage of total project budget set aside for M&E	6.3%

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 and Illegal Wildlife Trade Challenge Fund' document and considered the implications of payment points for cashflow purposes.

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

25. 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.

(297 words) This project creates value by enabling regional integration presently lacking, which is critical because the targeted *Dalbergia* FGRs exist in fragmented, transnational populations. The project joins up existing programmes in Mekong countries, fills gaps identified in each country, and facilitates knowledge exchange internally and externally with China and Europe.

The budget allocation includes 44% for the four partner organizations in developing countries, 20% for the international NGO Bioversity International (Malaysia office), 36% for Oxford in the UK for coordination, training and M&E.

There are 12 named staff from Mekong countries and 74% of the financial resources to support them will be funded by other sources, i.e. the organizations that employ them. These partner organizations will also co-fund £28K of the other costs. The duties of these co-funded staff will span all the project objectives (see budget spreadsheet for roles and % time), while the Darwin Initiative will provide most of the funds for field operations and travel that would not be available otherwise. Therefore, without the Darwin funding the proposed work on *Dalbergia* would not be done and the staff would work primarily on other objectives only at a national level.

We have endeavoured to reduce costs by using reasonable honoraria and project staff time allocations; requesting Darwin funds only for essential staff, including a socio-economic consultant in years 1 and 2 for 30-40 days to further strengthen the community and people benefits. The project will gain added value from co-funded research in population and conservation genetics in *Dalbergia* through involvement of an Oxford DPhil student who is from the region, a research project focused on *Dalbergia* in neighbouring Chinese provinces (see 17b). This research will further develop the knowledge base and facilitate continuous improvement of the conservation programmes during the project and beyond this funding cycle.

26. 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.

No capital items to be purchased

27. 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:
Co-funding from Mekong region partner organisations: total of £XXX,XXX for staff and other costs (See partner organization details in the Budget Form)

- Institute of Forest & Wildlife Research & Development, Cambodia: £X,XXX for all of the time of the named national coordinator and the technical staff member, representing 40% of staff costs.

- National Agriculture & Forestry Research Inst., Lao PDR: £XX,XXX including £X,XXX for named staff (100% of staff) and £XX,XXX for operating and overhead representing 41% of the other costs.
- Center for Biodiversity & Biosafety (Academy of Agricultural Sciences), Vietnam: £XX,XXX for partial support of each of the team members, representing 64% of staff costs.
- Department of National Parks, Wildlife & Plant Conservation, Thailand: £XX,XXX, to cover all of the time for the named staff members including the national coordinator, technical and support staff members, representing 100% of the staff costs.

University of Oxford – Bioscience doctoral training programme (BBSRC funding): £XX,XXX to support a DPhil student bursary and research costs of £XX-XX,XXX per budget year; University and college fees not included. The student entered the DPhil programme in 10-2017 and will carry out the research work on Dalbergia 07-2018 to 06-2021. (see lead organization details in the Budget Form)

****NOT INCLUDED IN BUDGET REQUEST -**

Chinese Academy of Forestry, Beijing, China: £XXX,XXX (estimated) for a Grant from the National Science Foundation of China to work on *Dalbergia* in China (led by Yongqi Zheng). The project aims to study the phylogeography of *Dalbergia* spp. and population genetics of key species including *D. cochinchinensis* and *D. oliveri*, which are targets of the present conservation project to facilitate FGR conservation and sustainable germplasm utilization. The project has explicit objectives to build links with neighbouring countries, more specifically members of the APFORGEN Network and involves Bioversity International as a partner.

Bioversity International -led project "Filling the knowledge gaps for genetic conservation of priority tree species in Asia", which started in December 2017 to develop and make available distribution and basic threat maps for 50 regional priority species. The two-year project is funded by the German Government for a total value of XXX,XXX eur.

27b) 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
None			

27c) None

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

Not applicable

28) Financial Management Risks

Explain how you have considered the risks and threats that may be relevant to the success of this project, including the risks of fraud or bribery.

(196 words) Most of the partners have previous experience in Darwin Initiative projects including the relevant financial requirements. We plan to transfer funds to partners twice per year to maintain a level of control over their use. Any financial risks or issues will be reviewed in M&E activities.

The value of the British pound has fluctuated in recent months and represents a factor of low to moderate risk for delivering project objectives. Its substantial devaluation could restrict the ability to carry out some activities in partner countries; however, this risk is mitigated by the significant use of other funding sources to support staff costs in several partner organizations. Any partner costs supplied in USD have been converted at the rate of 1GBP to 1.37USD.

The project lead (Oxford) has clear policies on fraud and bribery www.admin.ox.ac.uk/councilsec/compliance/briberyfraud/ including a bribery and fraud risk assessment toolkit. Having four different partners spreads the risks and mitigates their potential impacts compared to only one partner. The partner organizations' budget (44% of total) only covers their own activities while Oxford will retain funds for coordination and M&E working with Bioversity International (56% of budget), which both present negligible risks of fraud or bribery.

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) and attach details of any advice you have received from them.

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

Certification

On behalf of The Chancellor, Masters and Scholars of The University of Oxford

I apply for a grant of **£409,897** 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 last two sets of signed audited/independently verified accounts and annual reports

Name (block capitals)	Dr Daniel Blakey
Position in the organisation	Deputy Head of Research Services

Signed**		**Date:**	29/01/2018

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**?	Yes
Have you read and can you meet the current Terms and Conditions for this fund?	Yes
Have you provided **actual start and end dates** for your project?	Yes
Have you provided your **budget based on UK government financial years** i.e. 1 April – 31 March and in GBP?	Yes
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?	Yes
Has your application been **signed by a suitably authorised individual**? (clear electronic or scanned signatures are acceptable)	**Yes**
Have you included a **1 page CV for all the key project personnel** identified at Question 6 and Question 10?	Yes
Have you included a **letter of support from your key partner organisations** identified at Question 9?	Yes
Have you **been in contact with the FCO** in the project country/ies and have you included any evidence of this?	Yes
Have you included a **signed copy of the last 2 years annual report and accounts** for the lead organisation?	Yes
Have you **checked the Darwin website** immediately prior to submission to ensure there are no late updates?	**Yes**

Once you have answered the questions above, please submit the application, not later than 2359 GMT on Monday 29 January 2018 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 - Fair Processing Notice

The purpose of this Fair Processing Notice is to inform you of the use that will be made of your personal data, as required by the Data Protection Act 1998.

The Department for Environment, Food and Rural Affairs (Defra) is the data controller in respect of any personal data that you provide when you complete your application, the grant acceptance and the supplier forms.

Defra will use your personal data primarily for the purpose of processing your application for Darwin Initiative funding. By submitting an application, applicants have agreed to any disclosure of the information supplied (including the content of a declaration or undertaking) which Defra considers necessary for the administration, evaluation, monitoring and publicising of the Funds (as detailed in the paragraphs below).

A completed application form signifies agreement to place certain details of successful applications (i.e. name, title, total grant value, project summary, lead organisation and location of project work) on the Darwin Initiative websites listed below. A completed application form also signifies agreement to send data on the project proposals during the application process to British Embassies and High Commissions outside the UK, including those outside the European Economic Area.

http://www.darwininitiative.org.uk;

https://www.gov.uk/government/groups/the-darwin-initiative;

Application form data will also be processed by Defra contractors dealing with Darwin Initiative administration, monitoring and evaluation (working within relevant data protection rules).

Defra may be required to release information, including personal data and commercial information, on request under the Environmental Information Regulations 2004 or the Freedom of Information Act 2000. However, Defra will not permit any unwarranted breach of confidentiality nor will we act in contravention of our obligations under the Data Protection Act 1998. The Grantee shall assist and co-operate with the Department (at the Grantee's expense) to enable the Department to comply with its disclosure obligations under these enactments.

We may use information, including personal data, to test computer systems to ensure that they work effectively and efficiently and to develop new systems in order to improve efficiency and the service that we provide to you and other persons. Any use of information for testing or developing computerised systems will be conducted in a secure manner in accordance with the Data Protection Act 1998 to safeguard the privacy of the information that you have supplied.

Defra's Personal Information Charter, which gives details of your rights in respect of the handling of your personal data, is on the Defra section of Gov.uk. If you don't have access to the internet, please telephone the Defra helpline 08459 33 55 77 and ask to speak to the Data Protection Officer for a copy of the Information Charter.