



Submit by 13 January 2006

DARWIN INITIATIVE APPLICATION FOR GRANT ROUND 14 COMPETITION: STAGE 2

Please read the Guidance Notes before completing this form. Applications will be considered on the basis of information submitted on this form and you should give a full answer to each question. Please do not cross-refer to information in separate documents except where invited on this form. The space provided indicates the level of detail required. Please do not reduce the font size below 11pt or alter the paragraph spacing. Keep within word limits.

1. Name and address of organisation

**Overseas Development Group
University of East Anglia
Norwich NR4 7TJ, UK**

2. Project title (not exceeding 10 words)

Bees, biodiversity and forest livelihoods in the Nilgiri Biosphere Reserve

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

Proposed start date: 1 June 2006		Duration of project: 36 months			End date: 31 May 2009	
Darwin funding requested	Total	2006/07	2007/08	2008/09	2009/2010	
	£275,308	£73,902	£88,003	£99,313	£14,090	

4. Define the purpose of the project in line with the logical framework

This Project seeks to elucidate the interdependencies between bees, biodiversity and forest livelihoods in the Nilgiri Biosphere Reserve (NBR), Western Ghats, India. The indigenous bees of the mountainous NBR are known to play an important role in local livelihoods (honey hunting is part of the culture), yet the bees have not been scientifically identified or classified, their populations and distributions are unknown, and their vital role in pollination and the maintenance of forest biodiversity has not been studied. This unique Project will endeavour to combine scientific data about the status of these indigenous bees and their ecology, with participatory livelihoods analysis. This will be achieved by strengthening the research capacity of the local organisation, Keystone, working in partnership with three UK institutions, and with local indigenous communities and Forest Department staff.

5. Principals in project. Please provide a one page CV for each of these named individuals

Details	Project Leader	Other UK personnel (working more than 50% of their time on project)	Main project partner or co-ordinator in host country
Surname	SEELEY	BRADBEAR	ROY
Forename (s)	Janet	Nicola	Pratim
Post held	Senior Lecturer in Social Development	Director	Founder
Institution	University of East Anglia	Bees for Development	Keystone Foundation
Department	Overseas Development Group	-	-

6. Has your organisation received funding under the Darwin Initiative before? If so, give details

The University of East Anglia has received grants under Rounds 11, 12 and 13 as follows:
Nepal: Institutionalising participatory biodiversity assessment conservation and action planning - Round 11/021
Brazil: Biodiversity and functional value of Amazonian primary, secondary and plantation forests – Round 12/014
Cambodia and Tanzania: Strengthening pro-poor wetland conservation using integrated biodiversity and livelihood assessment – Round 13 (Project leader: IUCN/SSC Freshwater Biodiversity Assessment Programme, Cambridge)

7. IF YOU ANSWERED NO TO QUESTION 6 describe briefly the aims, activities and achievements of your organisation. (Large institutions please note that this should describe your unit or department)
N/A

8. Please list the UK (where there are partners in addition to the applicant organisation) and host country partners that will be involved in their project and explain their roles and responsibilities in the project. Describe the extent of their involvement at all stages, including project development. What steps have been taken to ensure the benefits of the project will continue despite any staff changes in these organisations? Please provide written evidence of partnerships.

Research partners
University of East Anglia, (Overseas Development Group), UK
www.uea.ac.uk/dev/research/lwintro.shtml <http://www.uea.ac.uk/dev/research/saintro.shtml>
 ODG is drawing on expertise from two research groups within the School of Development Studies
 i) Livelihoods and Wellbeing Research Group
 ii) South Asia Research Group
 Key specialists in this Project include Dr Janet Seeley, Senior Lecturer in Social Development, and a leading researcher of sustainable livelihoods in India; Dr Adam Pain, experienced in mountain ecosystems and rural livelihood change and intuitional development; Mr Paul Burgon, experienced in capacity development and project planning and management.
Bees for Development, Monmouth, UK www.beesfordevelopment.org
 BfD is a specialist organisation providing advice on apidology and development, with over 20 years' experience in enhancing understanding of wild bee populations, their ecosystems and the nature of their exploitation. Dr Nicola Bradbear has worked in South India and with these Project partners since 1993.
University of Reading, Centre of Agri-Environmental Research, UK <http://www.rdg.ac.uk/caer>
 A leading research group assessing the biodiversity of pollinators and the services they provide to both agricultural crops and wild plants. Dr Simon Potts and Stuart Roberts have experience in field-based surveys and training local partners in pollinator surveys, pollination service assessment, and identification of pollinators and analysis of data.
Keystone Foundation, Kotagiri, Tamil Nadu, India <http://www.keystone-foundation.org>
 Based in Kotagiri in the heart of the Nilgiri Biosphere Reserve (NBR), Keystone's goal is to work on issues of natural resources and livelihoods with indigenous people in mountainous regions. The Foundation, with a staff of 30, has completed 12 years of work on eco-development initiatives. Two of the Directors, Pratim Roy, and Snehlata Nath have been closely involved with the development of this Project.
Team composition

Dr Janet Seeley (UEA)	<i>Team Leader, Livelihoods and poverty specialist</i>
Dr Nicola Bradbear (BfD)	<i>Apidology adviser, Project co-ordinator</i>
Mr Pratim Roy(Keystone)	<i>Ecologist, Local Project co-ordinator</i>
Mr Paul Burgon (UEA)	<i>Development organisations adviser</i>
Ms Snehlata Nath (Keystone)	<i>Sociology adviser for NBR</i>
Dr Adam Pain(UEA)	<i>Biodiversity management and development, monitoring and evaluation adviser</i>
Dr Simon Potts (CAER)	<i>Pollination and biodiversity adviser</i>
Mr Stuart Roberts(CAER)	<i>Expert entomologist and pollination scientist</i>

Table 1 Roles and responsibilities of the UK and host country partners

Component	Lead partner	Comments/previous experience of lead partner
A RESEARCH		
1 Science of indigenous bees and melliferous	BfD (Dr Nicola Bradbear)	Extensive experience of taxonomy and systematics of Asian bee species and role in rural livelihoods

flora		
2 Socioeconomic and livelihood studies at 5 project centres	UEA (Dr Janet Seeley) & Keystone (Snehlata Nath)	At forefront of social sciences discipline – in particular, sustainable livelihoods approach as used by DFID and international NGOs
B INSTITUTIONAL CAPACITY BUILDING		
1 Indigenous bee and biodiversity resource unit [IBBRU]	Keystone & BfD (Pratim Roy & Dr Nicola Bradbear)	Experience of setting up NGO-based research laboratory for honey testing and pollen analysis
2 Field centres	Keystone (Pratim Roy)	Over 12 years experience of working with indigenous livelihoods in Nilgiri Biosphere Reserve
3 State Forest Departments	UEA (Dr Adam Pain)	Experience of working with government agencies responsible for mountain biodiversity and rural livelihoods (Bhutan, Nepal)
C TRAINING		
In-country		
1 Research design, taxonomy, population distribution, floral resources and pollination	BfD (Dr Nicola Bradbear), & Reading University, CAER (Dr Simon Potts & Stuart Roberts)	Experience of framing research questions, experimental design and analysis. At forefront of tropical bee ecology in Asia.
2 Information systems	Keystone (Pratim Roy)	Electronic database experience
3 Livelihoods analysis and governance	UEA (Drs Janet Seeley and Adam Pain)	Teaching and research experience in livelihoods and governance in mountain ecosystems
4 CBD Implementation	UEA (Drs Adam Pain and Paul Burgon)	Knowledge of State Forest Departments in relation to international conventions
5 Generic skills in surveys and analysis	Keystone (Snehlata Nath)	Experience of qualitative and quantitative research techniques – e.g. livelihoods, gender, NR mapping
In UK		
1 Bee and pollination science	CAER, Reading University, Dr Simon Potts & Stuart Roberts)	Creating reference collections of insects, analysing data for estimates of diversity and abundance, and pollination studies.
2 CBD Implementation and eco-study tour	UEA (Dr Adam Pain and Paul Burgon)	Experienced trainer and facilitator in NR-related fields
D DISSEMINATION AND ADVOCACY		
In-country		
1 International workshop on indigenous bees	Keystone & BfD (Pratim Roy & Dr Nicola Bradbear)	Experience of holding international workshops in UK and India
2 Annual multi-stakeholder workshop on indigenous bees	Keystone (Pratim Roy)	Experience of working with many stakeholder groups from indigenous communities to international policy makers
3 Press, radio and TV reports every 6 months	Keystone (Pratim Roy)	Knowledge of effective communication strategies in development in India
4 Other dissemination	Keystone (Pratim Roy)	Knowledge of formal and informal dissemination methods
In UK		
1 Press, radio and TV reports every 6 months	UEA/BfD (Drs Nicola Bradbear and Janet Seeley)	Supported by DFID Broadcast Media Scheme currently located at UEA
Internationally		
1 Apimondia Congresses	BfD (Dr Nicola	President of the <i>Apimondia Standing Commission</i>

	Bradbear)	<i>Beekeeping for Rural Development</i> , and organising relevant Symposia at forthcoming Congresses in Australia 2007, France 2009
2 Asian Apiculture Conference	BfD (Dr Nicola Bradbear)	Vietnam 2008
3 Indigenous people and livelihoods conference	UEA (Drs Adam Pain and Janet Seeley)	UK 2008
GOVERNMENT PARTNERS		
1 Facilitation of research activities	State Forest Departments in 3 states	Experience of planning and implementation at field level
2 Participation in capacity building and training	State Forest Departments in 3 states	Experience of human resources development programmes within government
3 Participation in dissemination and advocacy activities	State Forest Departments in 3 states	Experience of mounting government campaigns on development issues

What steps have been taken to ensure the benefits of the project will continue despite any staff changes in these organisations? Please provide written evidence of partnerships.

The impetus for this Project has evolved out of earlier collaborations between all four organisations, and each has taken a full and equal role in the elaboration of this proposal. Each organisation has a team of experts working in their respective fields and Project continuity is assured.

9. What other consultation or co-operation will take place or has taken place already with other stakeholders such as local communities? Please include details of any contact with the government not already provided.

2004-5

- Dialogue and discussion between host country and UK partners on priority development needs of the Nilgiri Biosphere Reserve (NBR) – identification of Darwin Initiative as a potential partner for biodiversity and livelihoods project.

2005

- Host country brainstorming on indigenous bees in the NBR (multi-stakeholder) and review of socio-cultural aspects of honey-hunters' way of life;
- Analysis of host country priorities in the context of the Convention on Biological Diversity (CBD);
- Discussion with current Additional Principal Chief Conservator of Forests (Tamil Nadu Forest Department);
- Joint assessment by all partners of strengths (over 10 years experience) of host country research partner (Keystone Foundation);
- Discussion with environmental lawyer with experience of CBD processes in India;
- One-day stakeholder workshop with indigenous communities from NBR (19/9/2005);
- Keystone Director Pratim Roy discussed this project with Ms. Anita Mawdsley, FCO at the British Deputy High Commission in Chennai on 16.12.2005. Ms. Mawdsley is responsible for media and public affairs for the Southern States of AP, Kerala, Tamil Nadu, Karnataka and Pondicherry.
- 3 official letters to the 3 Principal Chief Conservators of Forests of Tamil Nadu, Kerala & Karnataka on 28/09/05 and follow-up.
- PR also presented the proposed project to Shri V. Gopinathan, IFS the Chief Conservator of Forests (Wildlife), Kerala Forest Department, Trivandrum on 13 Dec 2005. Contacted the Secretary Forests & Wildlife, Govt. of Kerala – Mr. Radhakrishnan, IAS on the need for this project in the NBR.
- Presented the Project plan to the Secretary, Forests, Mr. Surjit Kumar Chaudhary, IAS, GoTN 24/10/05. Met the PCCF, Tamil Nadu Forest Department, Dr. Sukhdev Thakur, IFS and explained the project. He requested detailed methodology – provided by BfD. On 22.12.2005 – the PCCF/Chief Wildlife Warden, Mr. C.K Sreedharan, IFS visited Keystone Foundation and one village (Semmanarai) to see our activities. PR explained the proposed Darwin project and provided necessary documents that TNFD requested.
- Follow-up with PCCF (Wildlife) Karnataka – our letter has been sent to the Deputy Conservator of Forests (DCF) & Deputy Wildlife Warden of Bandipur, Hunsur & Chamrajnagar (all divisions falling within NBR). Follow-up to all the DCFs were made. Chamrajnagar DCF – Dr. R. Raju, IFS requested a

meeting and detailed presentation. PR visited on 24.12.05, and his letter of recommendation has been subsequently received (attached). Tamil Nadu Forest Department have sent a letter of support (attached), while those from Kerala and Karnataka are in the pipeline.

In addition, the following communities and organisations have already been, and will be further consulted regarding the project:

- Local communities – indigenous community groups (e.g. *Irula, Kurumba, Todas, Kattunaickens*), Village Forest Councils (e.g. Nilambur, Wynaad, Sathymangalam);
- Local NGOs – Save Nilgiris Campaign;
- National NGOs – ATREE, Bangalore; CPR Environmental Education Centre, Chennai;
- International NGOs/Foundations – IUCN (Netherlands Committee), Ford Foundation, Charities Trust UK, Swedish Society for Nature Conservation;
- Research organisations – Salim Ali School of Ecology, Pondicherry University; French Institute in Pondicherry; Indian Institute of Forest Management, Bhopal; Department of Entomology, Tamil Nadu Agricultural University; Central Bee Research and Training Institute, Poona; Centre for Ecological Sciences, Indian Institute of Science; Kerala Forest Research Institute.

PROJECT DETAILS

10. Is this a new initiative or a development of existing work (funded through any source)? Are you aware of any other individuals/organisations carrying out similar work, or of any completed or existing Darwin Initiative projects relevant to your work? If so, please give details explaining similarities and differences and showing how results of your work will be additional to any similar work and what attempts have/will be made to co-operate with and learn lessons from such work for mutual benefits.

This is a new initiative, unique in its field, both regionally and internationally. No other organisations worldwide are addressing the complex interdependencies between bees, biodiversity and indigenous people, through the application of scientific research combined with sustainable livelihoods analysis. This work is embedded in Keystone's exceptional knowledge of the socio-cultural aspects of indigenous people in NBR and its proven record of effective project implementation in this field.

While Keystone's initial studies have suggested the central role of bees and NTFPs in both the ecosystem and livelihoods of local communities, the links need to be elucidated through scientific research on indigenous bees and melliferous flora, as well as socio-cultural and livelihoods analysis. This will provide a deeper understanding of the importance of biodiversity in livelihood strategies, and conversely the role of indigenous people in the conservation of natural ecosystems. In parallel with strengthening the evidence base, CBD aims and objectives can be furthered through a number of targeted capacity building, training, dissemination and advocacy activities.

The following are recent, relevant studies:

Project title	Main findings	Possible synergies with current proposal
1. Nepal: Institutionalising participatory biodiversity assessment conservation and action planning (Darwin Round 11/021 – led by UEA)	Close working relationships with forest departments and local communities led to improved livelihood options and biodiversity outcomes	Biodiversity assessment methods; Participatory approaches; Sustainable livelihoods approaches.
2. India: People and plants – training Darwin mentors (1000 teachers) – undertaken by Kodaikanal Botanic Gardens with BGCI, UK	Eagerness of teachers to incorporate ecological principles in their school curricula	Possible linkages related mainly to dissemination and advocacy – particularly ecological awareness for schools
3. India and Nepal: Hindu Kush and the Himalayas study of beekeeping and wild bee exploitation – BfD with Keystone	Joint collaborative work established central role of bees in livelihoods for indigenous peoples in Hindu Kush	Direct previous experience in identifying interdependence of bee populations and indigenous hunter-gatherers
4. India: Conserving India's biodiversity – NGO training and projects with local communities (Darwin – Centre for Environmental	Readiness of NGOs to appreciate value of biodiversity and identification of threats	Linkages with dissemination and advocacy activities and valuable experience of working with local communities

11. How will the project assist the host country in its implementation of the Convention on Biological Diversity? Please make reference to the relevant article(s) of the CBD thematic programmes and/or cross-cutting themes (see Annex C for list and worked example) and rank the relevance of the project to these by indicating percentages. Is any liaison proposed with the CBD national focal point in the host country? Further information about the CBD can be found on the Darwin website or CBD website.

The project will assist India at district, state and national level by through capacity building and training. Keystone already enjoys cooperation with the Tamil Nadu and Kerala Forest Departments and this project will enable links to be built with Karnataka Forest Department.

Liaison with the CBD national focal point will relate to the following articles:

Relevant CBD Articles

Approx % relevance/emphasis of project

Article 6a) Develop national strategies

Article 6b) Integrate biodiversity to relevant sector

Article 7b) Monitor biodiversity components offering potential for sustainable use 10%

Article 7c) Identify adverse processes

Article 8 c) Manage biological resources

Article 8d) Promote protection of ecosystems

Article 8e) Protect areas adjacent to protected areas 20%

Article 8i) Work towards compatibility between biodiversity and sustainable use

Article 8j) Respect, preserve and maintain local knowledge 20%

Article 10 a-e) Sustainable use of components of biodiversity 30%

Article 11 Incentive measures

Article 12 Research and training 20%

Article 13a) Promote understanding of biodiversity conservation

Article 17 Exchange of information (including indigenous knowledge)

Article 18.4 Develop cooperation (including indigenous and traditional technologies)

The *International Pollinator Initiative (Conservation and Sustainable Use of Pollinators)* has several key elements to which this project contributes: assessing the status and trends of pollinators, causes of declines and potential impacts, and promoting the conservation and sustainable use of pollinator diversity in agricultural systems.

We are also taking account of *Preamble 13*, which recognises the vital role of women in the conservation and sustainable use of biodiversity, and affirms the need for full participation.

12. How does this project meet a clearly identifiable biodiversity need or priority defined by the host country? Please indicate how this work will fit in with National Biodiversity Strategies or Environmental Action Plans, if applicable.

<u>CBD/National Biodiversity Strategy & Action Plan (NBSAP) priority ~ Indian response</u>	Project relevance
General 1 Work at the local level with participatory approach 2 Undertake local biodiversity studies	The project's fundamental approach to issues Bee ecology and related studies
Article-specific 6a) Develop national strategies	Build local capacity as described below
6b) Integrate biodiversity to relevant sector	Elucidate biodiversity/forestry issues and their interaction
7b) Monitor biodiversity components – high priority to botanical and zoological surveys	Survey of botanical and bee resources
7c) Identify adverse processes	Identification of proximate and macro threats
8c) Manage biological resources - involving local communities in eco-development	Interaction with local communities at 5 Centres
8d) Promote protection of ecosystems	Interaction with local communities at 5 Centres
8e) Protect areas adjacent to protected areas	Interaction with local communities at 5 Centres
8i) Work towards compatibility between biodiversity and sustainable use	The central theme of our project

8j) Respect, preserve and maintain local knowledge – biodiversity registers – traditional knowledge digital library – enactment of the Biodiversity Bill 2000	An important strand of our research
10a-e) Sustainable use of components of biodiversity	These priorities are closely aligned with our project's purpose
11 Incentive measures – benefit sharing under the Joint Forest Management Scheme	An important aim of the project is, by taking a participatory approach, to engage with local Forest Committees
12 Research and training – more taxonomy and systematics – ecosystem research scheme – Eastern and Western Ghats Research Programme	Outputs A and C are central to these important objectives
13a) Promote understanding of biodiversity conservation – environmental awareness programme and daily broadcast on environmental issues	Output D – dissemination and advocacy activities are in line with this objectives
17 Exchange of information (including indigenous knowledge)	Output D, as above
18.4 Develop cooperation (including indigenous and traditional technologies) – technical and scientific cooperation with other CBD members	Our project plans to foster technical and scientific cooperation through regional and international meetings and Congresses

13. If relevant, please explain how the work will contribute to sustainable livelihoods in the host country.

The sustainability of livelihoods depends on continually generating knowledge that can be made practical and can benefit particular groups. The proposed work aims primarily to target indigenous peoples of the NBR with a mixed set of activities comprising: increasing the scientific knowledge base, studying and enhancing livelihood strategies, building institutional capacity, training and dissemination, and advocacy. Central to the project is a participatory approach, which aims to involve a wide range of stakeholders from the beginning. 'Improved' knowledge in isolation will not contribute to livelihoods unless rational incentives exist for its future institutional home and healthy growth. Inclusion of all parties in project development – with a common commitment to the project purpose – offers the greatest chance for new findings to be taken up, to be accommodated by 'appropriate institutions' and to lead to successful outcomes - in this case, for both biodiversity and livelihoods.

14. What will be the impact of the work, and how will this be achieved? Please include details of how the results of the project will be disseminated and put into effect to achieve this impact.

The immediate impact of the project will be felt through the planned outputs under each component and the project purpose should be realised through the successful achievement of the outputs. As far as long-term *outcomes* are concerned, these are essentially responses (both ecological and human) and cannot be guaranteed by the project – however, a plan to measure outcomes will be put in place to detect change from an early stage. (see Question 22 below)

A Research impacts (short term)

- New scientific knowledge in bee taxonomy and systematics; characterisation of habitat use (food resources and nesting);
- New livelihoods knowledge – livelihoods values of bee species (economic and social);
- Valuation of habitats – combination of habitat requirements and estimated livelihood values of bees; potential for prioritisation of conservation target areas.

B Institutional capacity building impacts (short term)

- Improved staff skills within well-motivated organisations e.g. a specialist research unit in an NGO, field centres within the local communities, and public service skills within State Forest Departments.

C Training impacts (short term)

- Improved professional skills amongst project participants in research design, information systems, livelihoods analysis and governance, CBD implementation, generic skills in survey, design, bee, and pollination science.

The results of the project will be disseminated under **Component D – 'Dissemination and Advocacy'** Activities will include in-country workshops, press, TV and radio reports as well as more highly targeted advocacy to opinion formers and policy makers. In the UK, press, radio and TV reports will reflect the in-country reporting. Internationally, the project will be promoted at the Apimondia Congresses in 2007 and

2009, the Asian Apiculture Conference in Vietnam 2008 and through an Indigenous Peoples and Livelihoods Conference to be held at UEA in 2008.

15. How will the work leave a lasting legacy in the host country or region?

The potential for sustainability and a lasting legacy are built into our choice of activities. In the medium term (2-3 years), new research led by BfD and UEA will find an institutional home within a new unit at Keystone, while capacity building, particularly in CBD obligations, will be undertaken directly with the State Forest Departments (SFDs). Finely targeted advocacy will seek to increase strong ownership amongst policy-makers at the central governmental level. In the longer-term (Year 3 onwards), Keystone will continue to host the research unit, while work on governance and CBD obligations will devolve to the SFDs, the TAC and local communities. At the Centre, advocacy will lead to inclusion of recommendations in national environment policy statements.

16. Please give details of a clear exit strategy and state what steps have been taken to identify and address potential problems in achieving impact and legacy.

The kind of interventions proposed under this project are not essentially new to the Indian partners and collaborating institutions – they do have existing activities in research, institutional capacity building, training and raising of environmental awareness. Therefore, in a sense, the institutional setting is present – and will continue to be there with or without new funding. This proposal is more about ‘investing’ in existing capacity rather than introducing for the first time a foreign concept which requires fundamental planning for ‘arrival’ and ‘exit’. That being said, however, the ‘investment’ proposed is by no means insignificant and so considerable care has been taken to choose activities that fit logically with the aims and mandates of the various participating organisations (see Section 15 above) and ensure that monitoring approaches are structured around these. Considerations relating to local sustainability (i.e. a well-defined ‘arrival and exit’ strategy) are discussed briefly below:

1 Keystone Foundation – the organisation has been working in the Nilgiri Biosphere Reserve (NBR) for over 12 years in the field of natural resources management and indigenous livelihoods; as an NGO, it fulfils a key role as an agency for change, positioned (institutionally) between civil society and government. This well recognised and appreciated position allows the Foundation to act as a vehicle for innovation through projects – and these attract funding from both national and international sources. As such, Keystone is ideally suited, in the medium term, to host the *Indigenous Bee and Biodiversity Resource Unit (IBBRU)* where interdisciplinary work related specifically to the NBR can flourish. In the longer term, as biodiversity conservation rises up the political agenda, this capacity may be transferable either to State Forest Departments and protected area authorities or to indigenous people’s organisations – but, for the time being, there is wide consensus that the role of the local NGO remains central to long-term socioeconomic development.

Indicators of serious consideration given to sustainability include:

- i) a signed commitment to the project;
- ii) a strong portfolio of adequately funded complementary work;
- iii) a series of planned visits and exchanges with UK partners to support the collaboration;
- iv) capacity building and training of staff at managerial and technical level;
- v) ethical and transparent approach to collaborative working so that experiences are shared in both technical and financial skills.

Anticipated risks have been identified and discussed amongst partners – these include:

- immediate availability and willingness of appropriate staff to participate in the project (i.e. agreed job descriptions, team composition, levels of remuneration);
- medium to long term staff interest in the project content and willingness to commit long-term;
- managerial vision and ability to see where project activities are best located (institutionally);
- whether natural and security conditions in the field sites remain supportive;
- whether the project outputs form a consistent package and remain convincing to both partners and wider stakeholders;
- whether the channels of communication remain open with both State and central government.

2 Government partners – the State Forest Departments of Kerala, Karnataka and Tamil Nadu have all been consulted and letters of support are appended. The project is offering assistance to the SFDs in meeting their CBD obligations through both workshops and study tours as well as assistance with implementation of the National Biodiversity Strategy and Action Plan (NBSAP).

3 Tribal Advisory Council – there are encouraging signs that effective representation of the interests of the 7-8 indigenous tribal groups can be handled by a ‘Tribal Advisory Council’ – certainly their collaboration is critical to the success of the 5 field centres with their research on biodiversity and livelihoods. Government is also increasingly committed to working with local people’s groups for effective local governance and for realising many of the CBD’s objectives (e.g. on sustainable livelihoods – CBD Preamble to the Convention clause 11).

Details given in Section 9 (above) on previous consultations demonstrate the care with which the project has sought to mitigate risks to non-collaboration and encourage a participative approach amongst a wide range of stakeholders.

17. How will the project be advertised as a Darwin project and in what ways will the Darwin name and logo be used?

Should funding for the project be agreed, it will be to the credit of a wide range of participants and each will be encouraged to highlight the stimulus to their work provided by the Darwin competition (in reports and dissemination materials) as well as the simpler act of branding project-related equipment and stationery.

Indeed the participants have recognised that, insofar as the Darwin Initiative is the UK’s contribution to realising the Convention on Biodiversity, the Darwin objectives could usefully be reiterated at related in-country seminars and workshops thereby fulfilling clause 13 of the Preamble to the Convention – namely, ‘*stressing the importance of, and the need to promote, international, regional and global cooperation amongst states and intergovernmental organisations and the non-governmental sector for the conservation of biological diversity and the sustainable use of its components.*’

It is encouraging to quote from the letter of support from the Karnataka State Forest Department – ‘*I propose to permit for this research provided if the researching authorities agree to make it as a ‘collaborative research’ project by closely involving the Karnataka Forest Department as the legal partners in the research project*’ It is clear that the Darwin Initiative has already made an impression based on the initial activities funded through pre-project funding.

At the branding level, the project will be advertised through:

- including the Darwin logo in all project outputs;
- exhibiting posters and other publicity material at project events;
- posting project updates on the websites of all partners;
- profiling the project at regional and international meetings;
- publishing findings in relevant European and Asian journals;
- high profile articles in *Bees for Development Journal* – this is published quarterly to over 130 countries. The Darwin Initiative project together with the logo and overall programme details will be featured in every edition over the course of the project lifetime (3 yr x 4 = 12 editions); *Bees for Development* is at the centre of an international network working in this field and the project will achieve widespread recognition through the Journal, website, training and other public events.
- press releases and articles in the UK, India and other Asian countries;
- posting of the Darwin Initiative logo alongside those of other key donors involved in matching or complementary funding.

18. Will the project include training and development? Please indicate who the trainees will be and criteria for selection and that the level and content of training will be. How many will be involved, and from which countries? How will you measure the effectiveness of the training and will those trained then be able to train others? Where appropriate give the length and dates (if known) of any training course. How will trainee outcomes be monitored after the end of the training?

Training and capacity development are important aspects of the Project. Training will be provided at different levels, and for different sectors as shown in the Table below:

Training activity	Level	Trainees	Criteria for selection
<i>In UK</i>			
Mountain biodiversity with respect to CBD, 2 weeks in UK	Senior staff	4 people: 3 from State Forest Department and 1 legal CBD advisor	To be selected by their own institutions
Bee and pollinator	Graduate	4 personnel from	To be selected by project

science, in UK at CAER Reading, BfD, and other research institutions, 3 weeks		Keystone, the Indian Partner Organisation	partners
Apicultural information systems, three weeks in UK at BfD	Graduate	2 personnel from Keystone.	To be selected by project partners
<i>In India</i>			
Institutional development and local governance, in India, six courses of 1 week duration	Appropriate to the Trainees,	Tribal Advisory Council and Forestry Dept personnel (numbers unknown at present)	To be selected by these institutions
Livelihoods analysis and local governance, by UK expert in India, four weeks	Graduate	5 personnel from Keystone.	To be selected by project partners
Biodiversity, bees and livelihoods, one week training in Project area	Appropriate to the participants	Groups of up to 50 people from local communities	Open to all local people who are interested

The effectiveness of the training activities will be measured through participant evaluation of the training and follow up, and the Partners continued interaction and collaboration with these trainees as the Project progresses. It must also be emphasised that the 60 weeks of technical assistance that will be provided throughout the course of this Project will give considerable direct training and capacity development opportunities to the various Project Partners and associated organisations.

On the job or formal training is only one-step in the capacity building process. While formal procedures for evaluating learning in training programme will be applied, attention will also be given to building evidence of the use to which the training is put by individual participants. This will include more observational evidence recorded by course participants using evidence of 'significant change' (see section 22). The monitoring of the advocacy component of the programme will also link to an evaluation of the effectiveness of the training components of the project.

LOGICAL FRAMEWORK

19. Please enter the details of your project onto the matrix using the note at Annex B of the Guidance Note. This should not have substantially changed from the Logical Framework submitted with your Stage 1 application. Please highlight any changes.

NB Changes to Stage 1 application are shown with underline.

<i>Project summary</i>	<i>Measurable indicators</i>	<i>Means of verification</i>	<i>Important assumptions</i>
Goal			
To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but poor in resources to achieve: <ul style="list-style-type: none"> • The conservation of biological diversity, • The sustainable use of its components, and • The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources 			
Purpose The interdependencies between indigenous bees, biodiversity and forest livelihoods in the Nilgiri Biosphere Reserve (NBR), Western Ghats, India elucidated, and the capacity of local researchers, indigenous people and government staff strengthened.	A reference collection of relevant indigenous bee species established. A reference collection of pollen slides established. Analysis of links between bees, biodiversity and forest livelihoods by Yr 3. <i>Indigenous Bee and</i>	Pollen slide reference collection Bee reference collection Project technical reports Resource Unit established, and annual progress	Existing legislation remains favourable. <u>That market forces do not undermine informal systems of regulation of</u>

	<p><i>Biodiversity Resource Unit</i> established.</p> <p>5 Field Centres, State Forest Depts and Tribal Advisory Council (TAC) strengthened by Yr 3.</p> <p>Partners trained in research methods, information systems, livelihoods analysis, local governance and mountain biodiversity by Yr 3</p> <p><u>Participatory capacity assessment.</u></p>	<p>reports</p> <p>Training reports</p> <p>Event proceedings, publications, media reports and policy documents</p> <p><u>Report on capacity development</u></p>	<p><u>resource extraction.</u></p> <p><u>Findings indicate that the current use and livelihood benefits are sustainable.</u></p> <p>Exotic bee species and/or associated pathogens are not introduced.</p> <p>Collaboration and co-operation with 3 State Forest Depts sustained.</p> <p>Other current natural conditions prevail.</p> <p>Project budget estimates hold true.</p>
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Outputs

A. Increased scientific and livelihood knowledge through research

<p>Characterisation and science of livelihood-relevant, indigenous bee species - their taxonomy, genetics, population, habitat, and distribution (of selected species) - studied and documented.</p> <p>Data collected on habitat and melliferous flora, mapping.</p> <p>Pollination studies in both natural forest and crops.</p> <p>Livelihood studies undertaken with indigenous people, and market and trade studies on bee products.</p>	<p>Experimental protocol designed for collection and analysis of specimens and data at the 5 research sites.</p> <p>A reference collection of selected indigenous bee species established.</p> <p><u>Data (morphometric and genetic) to assist correct classification of indigenous <i>Apis</i> bee species, (or placement within genera).</u></p> <p><u>An interactive key for identification of <i>Apis</i> bee species (using LUCID software), and for other relevant bee genera as far as possible.</u></p> <p><u>Data and analysis of bee diversity and abundance: population data for <i>Apis dorsata</i>.</u></p> <p>A catalogue and database of melliferous flora at 5 sites created (using GIS).</p> <p>Data on pollination requirement of some local crops and non-timber forest products.</p> <p><u>Traits analysis completed to compare data for key species collected at five sites.</u></p> <p>The role of bees in local livelihoods analysed.</p>	<p>Permanent <i>Apis</i> and other bee reference collection established.</p> <p>Interactive key for bee identification established (to species level for at least <i>Apis</i>).</p> <p>Permanent pollen slide library established.</p> <p>Research and survey data, genetic data and reports.</p> <p>GIS maps, electronic database, and reports.</p> <p>Published documents</p>	<p><u>That project partners remain committed to research and capacity building, and have appropriate expertise.</u></p> <p><u>That realistic market data is accessible.</u></p>
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	Market assessment by Yr 3.		
B. Strengthened capacities of key institutions			
<i>Indigenous Bee and Biodiversity Resource Unit</i> established as a Regional Resource Centre for mountain communities of Western and Eastern Ghats and capacity of existing Field Centres, State Forest Depts and Tribal Advisory Council enhanced	New staff and facilities provided to create the <i>Indigenous Bee and Biodiversity Resource Unit</i> within existing campus of Keystone in NBR, and at 5 field centres. Forest Dept personnel trained by Yr 3. Tribal Advisory Council trained in institutional development and local governance by end Yr 3	<u>Staff complement.</u> <u>Inventory of facilities.</u> Range and number of publications distributed, enquiries answered, and web pages created/updated. <u>Record of training events.</u>	<u>That the local partner organisation has commitment and capacity to develop the new Unit and associated centres.</u> <u>That State Forest Depts remain supportive to the Project</u>
C. Enhanced technical and professional skills in host country through training			
Training on bee science, mountain biodiversity with respect to CBD, and information systems undertaken in UK. UK technical input concerning entomological research design, methodology, livelihoods analysis and local governance provided in India.	4 people trained on bee science for a total three weeks in UK by end of Year 2 4 people (3 senior staff from State Forest Department and 1 legal CBD advisor) trained for 2 weeks in UK by end Year 2 2 persons trained at Bees for Development for a total three weeks each in UK by end of Year 2 5 people trained for 4 weeks on livelihoods analysis and local governance by UK expert by end of Year 1 Supervision of research by local staff designed, implemented and analysed at five distinct ecological sites by end Year 2.	Research Progress reports. Back to office reports Certificates Research protocols for five sites prepared	That people remain in post following training in UK.
D. Increased awareness and policy engagement in India and UK through dissemination and advocacy			
Stakeholder workshops held in NBR. Darwin Initiative Project aims and achievements explained and promoted through various forms of media in UK and India Policy recommendations concerning the <i>bees - biodiversity - livelihoods</i> linkages developed. International conferences attended. International workshop on <i>Darwin Initiative Project on Indigenous Bees, Biodiversity and Livelihoods</i> , held in India in year 3.	Each year, 50 participants from NBR informed about the Project and its progress. Web pages for partner organisations, media reports in UK and India. Policy document prepared and peer reviewed at end of Yr 3. International environmental and development community gain appreciation of links between bees, biodiversity and livelihoods.	3 Seminar reports and documented feedback. Number of web site hits, number of media events and documented feedback. Policy documents. Back to office reports Conference proceedings. Workshop documents and Proceedings	<u>That there remains commitment to pro-poor biodiversity policies in India and UK.</u> Media reports etc. reach and effectively influence target audiences. Stakeholders participate fully in workshops and dissemination events.
Activities	Activity milestones (assumptions shown above)		

A. Research	Yr 2: Livelihood-relevant indigenous bee species identified and classified. Yr 3: Data for bee populations, distribution and ecology in 5 sites in NBR. Catalogue and database of melliferous flora at 5 sites. Sustainable livelihood analyses, and people's biodiversity registers for indigenous communities living adjacent to 5 sites
B. Institutional capacity building	Yr 1: 6 consultations with members of the TAC held on institutional development and local governance issues. Yr 1-2: Functional capacity to create the <i>Indigenous Bee and Biodiversity Resource Unit</i> within the existing campus of Keystone in NBR. Yrs 2-3: Support for personnel from 3 State Forest Depts on CBD implementation and biodiversity tools and methods Yr 3: Project research and survey implemented by 5 Field Centres
C. Training	Yr 1: Scoping mission to elaborate field research. Research methodology developed for 5 sites. 5 people from partner institutions trained in sustainable livelihoods and local governance. Study tour on CBD issues and mountain biodiversity. Training manual developed on apiculture and honey processing Training for 50 people from indigenous communities living adjacent to 5 sites. Yr 2: 10 people trained in UK. Training manual on survey analysis and methods distributed. Yrs 2-3: Research by local staff designed, implemented and analysed at 5 ecological sites.
D. Dissemination and advocacy	Yrs 1-3: Stakeholder Workshop held in NBR for Forest Dept., Village Forest Councils, CBOs, Govt, private sector 4 media reports per year provided to internet, press, radio, TV in UK and India. Attend international meetings and present papers and posters. Yr 3: Policy document prepared. Organisation of International Workshop on Darwin Initiative Project on Indigenous Bees in NBR. Publication of Workshop Proceedings, other documents and materials.

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

Project implementation timetable		
Date	Financial year	Key milestones
By end of July 06	Apr-Mar 2006/7	Project inception meeting of partner organisations
By end of July 06		First media report: Project announced in Press Releases and on Partner organisations' web sites, and provided to press, radio, TV in UK and India (national and local)
By end of Aug 06		Partners have signed agreements to participate in Project activities
By end of Aug 06		Local partner has recruited Project personnel
By end of Aug 06		Scoping mission to elaborate field research completed
By end of Sep 06		Research methodology established
By end of Oct 06		Training manual on survey analysis and methods prepared and distributed
By end of Dec 06		Existing pollinator, biodiversity and livelihood data sets for NBR and 5 project sites have been identified and collated
By end of Dec 06		Local partner organises facilities to establish project activities at 5 field centres
By end of Dec 06		Field work has commenced at 5 sites in NBR
By end of Dec 06		Second media report: Project announced in Press Releases and on Partner organisations' web sites
By end of Mar 07		4 people (3 senior staff from State Forest Department and 1 legal advisor) trained on mountain biodiversity with respect to CBD for 2 weeks in UK
By end of Mar 07		1 st Project Stakeholder Workshop held in NBR: 50 participants from NBR informed about the Project and its progress
By end of May 07		Apr-Mar 2007/8
By end of June 07		Third media report provided to press, radio, TV in UK and India (national and local)

Sep 07		Project presented at 40 th Apimondia International Congress in Melbourne, Australia	
By end of Nov 07		50 people from indigenous communities living adjacent to the 5 sites receive one week training on biodiversity issues	
By end of Nov 07		Interactive key established for identification of selected bee species	
By end of Nov 07		Review of research so far completed by local staff at five sites	
By end of Nov 07		Mid-term Project evaluation	
By end of Dec 07		Fourth media report provided to press, radio, TV in UK and India (national and local)	
Mar 08		Project Presented At 9th Asian Apiculture Association Conference In Vietnam	
By end of Mar 08		2 nd Project Stakeholder Workshop held in NBR: 50 participants from NBR informed about the Project and its progress	
By end of May 08	Apr-Mar 2008/9	Local partner has organised facilities to create the <i>Indigenous Bee and Biodiversity Resource Unit</i> within existing campus Keystone in NBR	
By end of May 07		Six consultations have taken place with members of Tribal Advisory Council living adjacent to 5 sites	
By end of May 08		Livelihood-relevant indigenous bee species at 5 sites identified and classified	
By end of May 08		Six people trained in UK: on bee science (four people, three weeks), and apicultural information systems and networks (two people, three weeks)	
By end of Jun 08		Fifth media report provided to press, radio, TV in UK and India (national and local)	
By end of Nov 08		Market assessment completed	
By end of Nov 08		Livelihoods analysis completed and documented	
By end of Nov 08		Tribal Advisory Council trained in institutional development and local governance	
By end of Dec 08		A catalogue and database of melliferous flora at 5 sites has been created	
By end of Dec 08		Sixth media report provided to press, radio, TV in UK and India (national and local)	
By end of Mar 09		3 rd Project Stakeholder Workshop held in NBR: 50 participants from NBR informed about the Project and its progress	
By end of May 09		Apr-Mar 2009/10	Forest Dept personnel trained in institutional development, local governance, and CBD implementation
By end of May 09			A catalogue and database of livelihood-relevant indigenous bee species has been created and completed for 5 sites
By end of May 09	Data on livelihood-relevant indigenous bee species population sizes obtained at 5 sites		
By end of May 09	People's biodiversity registers created for indigenous communities living adjacent to 5 sites completed		
By end of May 09	Data on bee classification, population sizes (of <i>Apis dorsata</i>) and distribution in five sites in Nilgiris Biosphere Reserve, compiled and linked with corresponding livelihoods and biodiversity analyses		
By end of May 09	Results disseminated through web pages of partner organisations, media reports in UK and India		
By end of May 09	Policy document prepared and peer reviewed		
By end of May 09	Project organises <i>Darwin Initiative International Workshop on Indigenous Bees, Biodiversity and Livelihoods</i> , to be held in India		
By end of May 09	Seventh media report provided to press, radio, TV in UK and India (national and local)		
By end of May 09	Publication and distribution of Workshop Proceedings, other documents and materials		

21. Set out the project's measurable outputs using the separate list of output measures.

PROJECT OUTPUTS		
Year/Month	Standard	Description (include numbers of people involved, publications

	output number (see standard output list)	produced, days/weeks etc.)
A. Increased scientific and livelihood knowledge through research		
by end Yr 3	8	At least 60 weeks of technical assistance (plus one MSc student 24 weeks) and capacity building provided by at least 6 specialists from 3 UK institutions
by end Yr 2	13A	Livelihood-relevant indigenous bee species identified and classified and reference collection established
by Yr 3	12A	Database produced for sizes of populations of selected bee species (at least for <i>Apis dorsata</i>) and the distribution of these bee species in 5 sites in Nilgiris Biosphere Reserve.
by Yr 3	10, 11B,	1 key, 1 catalogue, 1 field guide, 1 manual, 1 paper
by Yr 3	10, 12A,	1 catalogue, 1 field guide and 1 database of melliferous flora at 5 sites created using GIS
by Yr 3	10, 11B	1 manual, 3 papers Sustainable livelihood analyses including risk assessment, and people's biodiversity registers completed for indigenous communities living adjacent to 5 sites
B. Strengthened capacities of key institutions		
by Yrs 1-2	20	£5,000 for additional functional capacity to establish an <i>Indigenous Bee and Biodiversity Resource Unit</i> within the existing campus of Keystone Centre in Nilgiris Biosphere Reserve
by Yrs 2	6A, 6B	At least 10 Personnel from 3 State Forest Departments trained in CBD and practical biodiversity tools and methods for 2 weeks
by Yr 3	22	Project research and survey being implemented by £13,500 for 5 existing Field Centres (equipped, and with 10 personnel trained in biodiversity, conservation, ecology and livelihood issues)
by end Yr 3	6A, 6B	At least 8 male and female members of the Tribal Advisory Council received 6 training courses of 1 week on institutional development and local governance issues
C Enhanced technical and professional skills in host country through training		
by end Yr 2	8	Supervision of research by local staff designed, implemented and analysed at 5 distinct ecological sites
	6A, 6B	4 men and women trained for a total 3 weeks in UK by end of Yr 2
	6A, 6B	2 men and women trained for 3 weeks in UK by end of Yr 2
	6A, 6B	5 men and women trained for 4 weeks by UK expert by end of Yr 1
	6A, 6B	4 people (3 senior staff from State Forest Department and 1 legal CBD advisor) trained for 2 weeks in UK
D. Increased awareness and policy engagement in India and UK through effective dissemination and advocacy		
By end Yr 3	17A, 17B	Each year, 50 male and female participants from NBR informed about the Project and its progress
	17A, 17B	Web pages created on sites of partner organisations.
	18C, 18D, 19C, 19D	2 media reports per year provided to press, radio, TV in UK and India (national and local)
	11A, 11B	Policy document prepared and peer reviewed at end of Yr 3
	14A, 14B	Darwin project aims and achievements understood by wider academic, government and private sector
	14A, 14B	International environmental and development community gain greater appreciation of the link between bees, biodiversity and livelihoods

PROJECT BASED MONITORING AND EVALUATION

22. Describe, referring to the Indicators in the Logical Framework, how the progress of the project will be monitored and evaluated, including towards delivery of its outputs and in terms of achieving its overall purpose. This should be during the lifetime of the project and at its conclusion. Please include information on how host country partners will be included in the monitoring and evaluation.

Log frames by their nature are deductive, based on a problem analysis that hypothesises direct causal linkages between activities, outputs and outcomes. A set of indicators (OVIs) are identified and generally predetermined and seek to demonstrate whether the presumed causality is working. It is important to recognise that there is a degree of under-specification in log frames and it is inevitable that things will not work in the way that is expected. The point of monitoring is to learn from this and understand what does and does not work, how this happens and where and why and to benefit from this learning. Monitoring should thus seek to build and both strengthen the monitoring around the deductive structure of the log frame and bring to bear inductive (working from specific evidence to built hypotheses) approaches to complement them as the project is implemented. In this sense, monitoring is as much about learning and communication as about accountability and management.

The project log-frame essentially identifies at the activity and output level the key indicators that will be used to monitor progress and ensure accountability issues are addressed. A number of points should be made though about components of the project in relation to M&E.

M&E in capacity building is notoriously difficult to do not least because capacity building is a relatively low-key process (training, mentoring, and advising). Indicators of change are difficult to establish and are often open-ended which emerge as capacity building proceeds. Understanding impact is difficult because of a long stretch between inputs, outputs and outcomes and the various levels at which capacity building operates. Capacity building has been compared to a drop of rain landing in a pond. The drop creates ripples which flow outwards with diminishing influence. However, the size and direction of the ripple is influenced both by the context in which it moves, and it in turn influences the context. Inevitably, time frames for capacity building outcomes and impacts can be quite long.

If capacity building is difficult to M&E, then advocacy is even more so. It raises particular problems of attribution. It also covers a spectrum of influences, from heightening awareness, contributing to debate, changing opinions, changing policy and having policy change implemented. These could be seen as a series of sequential steps to be followed through. The multiple levels at which advocacy engages argue strongly for a robust stakeholder analysis at the outset and targeting exercise, which the project will carry out. Assessing advocacy effects, which may often be the intermediate steps between activities and outputs, and outputs and effects will require monitoring and recording what targets say and do, monitoring relationships with the targets, monitoring the media and monitoring ones own reputation and evidence of influencing.

In addition, output to outcome causalities have to pay particular attention to the external environment. There are many organisations engaged in the Nilgiri Biodiversity Reserve. Changes in outcome and impact indicators may also be partly driven by their activities or other factors exogenous to the project. Causalities are not therefore straightforward (e.g. outputs to outcome effects), either conceptually or in terms of their time and place dimensions.

Accordingly, the project will combine the deductive framework for monitoring outlined in the log frame with a more inductive approach, which will build on systematic recording of observations of significant change, by all actors in the project. These observations will include:

- A brief description of what the significant event is;
 - An explanation of why the writer thinks it is significant
 - An explanation by the writer of what he/she thinks brought about the event/ significant change
 - Evidence that the significant event has taken place so that an independent observer could verify the story.
- This systematic documentation, which will foster a broad participatory approach to both indicator identification and the assessment of the indicators, will feed into an output to purpose review that the project will implement 18 months after project inception. Full documentation of these processes will be provided.