

Darwin Initiative Annual Report

Important note:

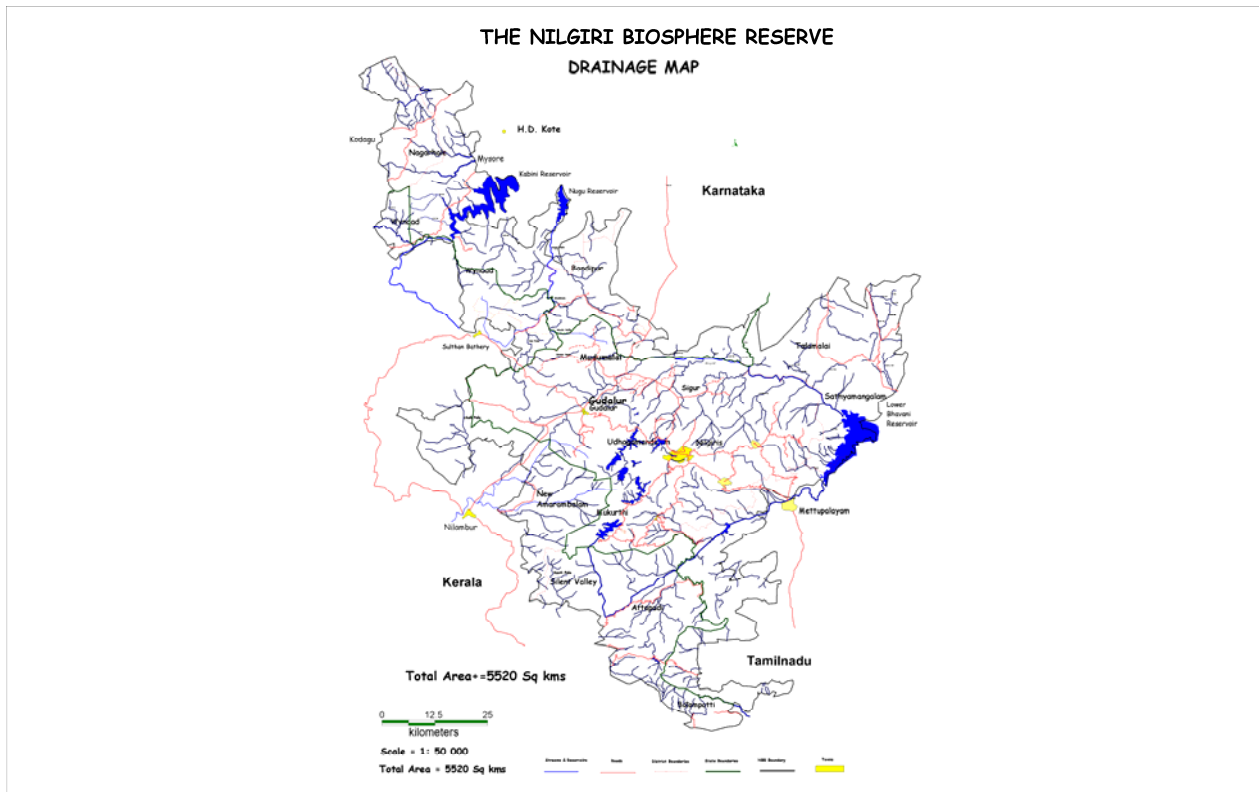
To be completed with reference to the Reporting Guidance Notes for Project Leaders – it is expected that this report will be about 10 pages in length – Submission deadline 30 April 2007

Darwin Project Information

Project Ref Number	15/001
Project Title	Bees, biodiversity and forest livelihoods in the Nilgiri Biosphere Reserve, India
Country(ies)	India
UK Contract Holder Institution	University of East Anglia/ODG
UK Partner Institution(s)	Bees for Development
Host country Partner Institution(s)	Keystone Foundation
Darwin Grant Value	275,308 GBP
Start/End dates of Project	1 June 2006 – 31 May 2009
Reporting period (1 Apr 200x to 31 Mar 200y) and annual report number (1,2,3..)	1 Apr 2006 to 31 Mar 2007 (Annual Report No. 1)
Project Leader Name	Dr. Janet Seeley
Project website	http://www1.uea.ac.uk/cm/home/schools/ssf/dev/people/academic/seeley/Research/NilgiriBiodiversity
Author(s), date	Janet Seeley, Pratim Roy, Nicola Bradbear, Adam Pain, Simon Potts, Kunal Sharma, Shiny Mariam Rehel, R. Eswaran and Samita Vasudevan, 6th April 2007

1. Project Background

This Project seeks to elucidate the interdependencies between bees, biodiversity and forest livelihoods in the Nilgiri Biosphere Reserve (NBR), Western Ghats, India. We are identifying and classifying indigenous bee populations, mapping their distribution and studying their role in pollination and the maintenance of forest biodiversity. We are also studying the place of indigenous bees in local livelihoods (honey hunting is part of the culture). We are combining scientific data about the status of these indigenous bees and their ecology, with participatory livelihoods analysis. Below is an example of a series of maps that we are currently preparing for a document that describes the research sites:



2. Project Partnerships

A series of visits to the Project site by UK collaborators has helped to strengthen the partnership with Keystone Foundation (the Indian partner). The visits have focused on capacity building in entomology, ecology and social science as well as field site visits and discussions about approaches to wild bees transects, livelihood mapping, and pan trapping methods for example. Frequent email and SKYPE contact in-between has ensured that we have stayed in close contact. While the capacity of staff in Keystone has undoubtedly increased through this interaction, the UK collaborators have also learnt from Keystone Foundation staff about the local flora and fauna as well as culture, which has served to ensure our partnership is balanced. The main challenge we have faced is establishing our partnership with the Forest Departments of Tamil Nadu, Karnataka and Kerala. Visits by Pratim Roy and Janet Seeley to the Principal Chief Conservators/Chief Conservators in these departments have met with a positive response and have given their full support to our work. Field staff have built rapport with forest officers 'on the ground' so we look forward to a fruitful partnership.

Recently the project has been in touch with a pollination project in the coffee growing areas of Western Ghats that approached us for exchange of information. Also, the current Ford Foundation funded Non Timber Forest Produce – Conservation & Development project has helped us to network with other organisations in the region working on biodiversity conservation (ATREE, Bangalore, Projects in Orissa dealing with Indigenous People & Forest Produce). The project still has to develop a link with a CBD focal point – this would gain momentum after the UK trip by senior forest officers and project team members in April 2007.

3. Project progress

3.1 Progress in carrying out project activities

Output A and C : The livelihood research component of the project is on schedule with on going surveys and observational research being carried out in the 16 villages adjacent to the sites selected. Two training sessions on social research methods were given in September and December 2006 by UK staff.

Output A and C: The biodiversity component that includes studies on bees and plants began on schedule and has been progressing well with plots being established and surveyed. The research

methodology has been developed and piloted and is now in use in the sites. A training manual on Bees and Biodiversity survey analysis and methods was prepared with the help of UK staff.

Output B: A resource unit and small laboratory have been established in Kotagiri, Keystone Foundation's head quarters

Output D: A bee and honey museum and education centre has been established in Ooty by Keystone Foundation (resourced largely with co-funding) and is beginning to be used to hold small workshops and information days for local people. Consultations have been held at the project sites to explain the project approach.

3.2 Progress towards Project Outputs

Good progress has been made in the first year recruiting and training staff and establishing the field sites, piloting methods of data collection and starting the main data collection phase. We are on schedule to achieve the outputs set out in our log-frame. The output level assumptions hold true. On-going activities to achieve the outputs include: Biodiversity: The bees collected through the pan traps have been stored in the laboratory. The bees are being identified. The honey bees belonging to genus *Apis* have been identified. The megachilids, halictids and the xylocopids are being identified up to species level. The plants specimens (30 species) and pollen slides (27species) are also maintained in the laboratory. The reference collection will be stored in the laboratory to explore the diversity and distribution of bee species in the Nilgiri biosphere Reserve. Social maps: The social maps were prepared during Oct/Nov 2006 for each village and these will be updated every six months to capture changes if any in the physical and social settings as well as infrastructure in the villages. Livelihood methodology: Based on discussions with the team, a list of topics to be studied in each site has been developed Of these settlement history, social structure, the things people do to make a living and their relationship with the forests are the topics are currently being explored in depth. Informal methods of information collection and careful recording and duplication of all significant observations and findings has been agreed on.

A monthly report is prepared by the field teams and shared with all UK-based collaborators.

3.3 Standard Output Measures

Table 1 Project Standard Output Measures

Code No.	Description	Year 1 total	TOTAL
6A	Number of people to receive other forms of education/training	17 (project field team)	17
6B	Number of training weeks to be provided	7 (entomology, social science and ecology)	7
7	Number of (ie. different types - not volume - of material produced) training materials to be produced for use by host country	1 manual field methods for entomology 1 manual social science methods	2
8	Number of weeks to be spent by UK project staff on project work in the host country	8	8
15A	Number of national press releases in host country(ies)	2	3
15B	Number of national press releases in UK	1 (in Bees for Development magazine)	

Code No.	Description	Year 1 total	TOTAL
17A	Number of dissemination networks established	1 (National Honey Tribal Network)	1
17B	Number of dissemination networks to be enhanced/extended	2 (networking with Ford Foundation project partners)	1
21	Number of permanent educational/training/research facilities or organisations to be established and then continued after Darwin funding has ceased	2 (at Keystone headquarters and in Ooty)	2
22	Number of permanent field plots to be established during the project and continued after Darwin funding has ceased	16 (distributed between the sites)	16
23	Value of resources raised from other sources (ie. in addition to Darwin funding) for project work	£41,250	

Table 2 Publications

Nil in year 1.

3.4 Progress towards the project purpose and outcomes

Steady progress has been made towards the purpose. The reference collection of bees and plants is being established in the laboratory. These are being maintained and taxonomically identified for the permanent bee reference collection and pollen library. The present research and information on livelihoods of the people will contribute the participatory livelihood analysis component of the project. Training on research methodologies have enhanced research knowledge and built capacity of local staff in generating information and maintaining records. The purpose level assumptions hold true.

3.5 Progress towards impact on biodiversity, sustainable use or equitable sharing of biodiversity benefits

The Honey and Bee museum has been established in Ooty and is being used for disseminating information on biodiversity in general and indigenous bees in particular. We have established a tribal honey network for sharing information among local people. These efforts will, we hope, help in the sustainable harvest of the honey and the conservation of indigenous bee species. Sixteen sub-sites have been selected as representative of different habitats and communities. This is a first attempt to quantitatively and qualitatively describe each of these habitats in relation to bee ecology, livelihood profiles and vegetation. Each of these sites are important biodiversity zones that will provide information and knowledge on pollination, foraging ecology, pollen and nectar plants distribution and peoples' livelihood dependency pattern on these natural resources. Through this fieldwork there is on-going interaction and dialogue with the Forest Departments of Tamil Nadu, Kerala and Karnataka where these sites are located. This interaction will help in identifying new arrangements and field level interventions towards conservation, documentation – something that has not been done before. Interaction is also taking place with villagers and other stakeholders.

4. Monitoring, evaluation and lessons

Our main monitoring tool is detailed monthly reporting. This allows the project to report progress against activities but also to provide a narrative on significant observation and events. This means we are building up a process document on project progress based on stories from the field, which all the field assistants are able to document (in local languages). These are then translated into English for sharing with the whole project team. Quarterly visits by UK-based staff provide opportunities for sharing and reflecting on progress. This approach has, so far, kept us on track as well as fed valuable learnings into the development of the project.

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

6. Other comments on progress not covered elsewhere

It has taken some time and effort to obtain permission from forest departments and National Biodiversity Authority (NBA), India, for sample collection in protected areas. This has not, fortunately, delayed the establishment of the field sites and we are pleased to say that the NBA and Forest Departments have been very cooperative and the final clearance is expected in a few days (email received 6th April 2007 assuring us of this).

7. Sustainability

Press releases, the opening of the Bee museum and sharing information with local people and Forest Department staff on the project have all raised interest in the subject of study. Keystone Foundation is well established in the NBR and we can expect the enhanced capacity Keystone gains through this project to pay dividends in terms of the sustainability of biodiversity in the NBR. It is too early to judge the extent of this impact.

8. Dissemination

As noted above, information has been shared with tribal communities living at the research sites, local people and tourists visiting the Bee museum in Ooty and through the press. The National Honey Tribal Network established in October 2006 is proving to be an effective fora for sharing information in India.

9. .

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

We agree for ECTF and the Darwin Secretariat to publish the content of this section.

The establishment of the Honey & Bee Museum, Ooty (the District Headquarters of the Nilgiris) has provided a platform for the Indigenous Bee & Biodiversity Resource Unit (IBBRU) established under the Darwin Initiative Project 'Bees, Biodiversity and Forest Livelihoods in the Nilgiris Biosphere Reserve'. The museum is in an old building in the heart of Ooty. The museum houses information posters on the biology of bees, ecology and tools and gear used by indigenous people who harvest from these species. Practical log hives, wall hives and basket hives show how local communities use appropriate technology to keep bees. The products made out of honey and bees wax are also on display. A separate resource unit with books, information, literature and audio-visual presentations of beekeeping, honey hunting and ecology of bees and people is available for visitors to use. A bees wax unit for children to learn and play in is available for small supervised groups. School programmes have been launched and a regular field course on ecology of Nilgiris with special reference to bees has begun with 4 modules for each class which will end in Dec 2007 with a feedback session. (photos available)

In October 2006 we held the launch of the National Honey Tribal Network at the Bee Museum. It was launched by Ms. Meena Gupta, a senior official from the Ministry of Tribal Affairs, Govt. of India, New Delhi. The Network is to identify sources of different kinds of honey and the different indigenous communities who harvest these species. The network through local contacts will gather information on bee populations and honey. The Network has had two meetings in Delhi where we have shared the Darwin Initiative Project with other organizations and Ministry officials.

Annex I - Report of progress and achievements against Logical Framework for Financial Year: 2006/07

Project summary	Measurable Indicators	Progress and Achievements April 2006 - March 2007	Actions required/planned for next period
<p>Goal: <i>To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but constrained in resources to achieve</i></p> <p><i>The conservation of biological diversity,</i></p> <p><i>The sustainable use of its components, and</i></p> <p><i>The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources</i></p>			<p><i>(do not fill not applicable)</i></p>
<p>Purpose</p> <p>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.</p>	<p><i>A reference collection of relevant indigenous bee species established.</i></p> <p><i>A reference collection of melliferous flora established.</i></p> <p><i>Analysis of links between bees, biodiversity and forest livelihoods by Yr 3.</i></p> <p>Indigenous Bee and Biodiversity Resource Unit established.</p>	<p>The establishment of the reference collections has begun as has the research on the links between biodiversity and livelihoods. Training and mentoring is building capacity. The establishment of the Indigenous Bee and Biodiversity Resource Unit in the Bee museum in Ooty is providing a platform for information sharing.</p>	
<p>Output 1. Increased scientific and livelihood knowledge through research</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>Data (morphometric and genetic) to assist correct classification of indigenous bee species, (or</p>		

Project summary	Measurable Indicators	Progress and Achievements April 2006 - March 2007	Actions required/planned for next period
	<p>placement within genera).</p> <p>A key for identification of bee species (using LUCID software).</p> <p>Data and analysis of bee diversity and abundance: population data for <i>Apis dorsata</i>.</p> <p><i>A catalogue and database of melliferous flora at 5 sites created (using GIS).</i></p> <p><i>Data on pollination requirement of some local crops and non-timber forest products.</i></p> <p><i>Traits analysis completed to compare data for key species collected at five sites.</i></p> <p>The role of bees in local livelihoods analysed. Market assessment by Yr 3.</p>		
<p>Activity 1</p> <p>1.1) Social mapping carried out</p> <p>1.2) Bees: Pantrap, foraging observation and sweeping methods used</p> <p>1.3) Melliferous plants : phenology study, pollen slides preparation</p>			<p>a) The social maps prepared during Oct/Nov 2006 will be updated every six months to capture changes if any in the physical and social settings as well as infrastructure in the villages.</p> <p>b) Sixteen permanent 1ha. plots in different parts of Nilgiri Biosphere Reserve established. The bee collection is being created through samples collected at these sites. The monthly samples are taxonomically categorized and the reference collection is stored in the laboratory.</p> <p>c)The melliferous plant specimens are collected and the herbarium is maintained in the laboratory. Pollen slides have been prepared for 27 species and pollen slide library is maintained in the laboratory</p>
<p>1.4) Livelihood research undertaken</p>			<p>d) Information on history, social structure, the things people do to make a</p>

Project summary	Measurable Indicators	Progress and Achievements April 2006 - March 2007	Actions required/planned for next period
1.5) Habitat Assessment made		<p>living and their relationship with the forests are the topics on which information is being collected. Information sheets and notebooks are being maintained by all the research staff. Besides the topics above, other observations are also being recorded in the notes.</p> <p>e) The plants species diversity in the 10 plots has so far been studied in detail.</p>	
Output 2. Strengthened capacities of key institutions	<p><i>New staff and facilities provided to create the Indigenous Bee and Biodiversity Resource Unit within existing campus of Keystone in NBR, and at 5 field centres.</i></p> <p><i>Forest Dept personnel trained by Yr 3.</i></p> <p>Tribal Advisory Council trained in institutional development and local governance by end Yr 3</p>		
<p>Activity 2</p> <p>2.1) Tribal Advisory Council consultations</p> <p>2.2) Indigenous Bee and Biodiversity Resource Unit set up</p> <p>2.3) capacity of existing Field Centres enhanced,</p> <p>2.4) Tribal Advisory Council enhanced</p>		<p>a) The honey and bee museum was established in October 2006. This houses the Indigenous Bee and Biodiversity Resource Unit. Information (including posters, videos, photos, books) on bees, honey collection, people and livelihoods in Nilgiri Biosphere Reserve is on display.</p> <p>b) Field staff were recruited in the first months of the project and the facilities in the field centres were renovated and equipped with computers, books and other materials.</p> <p>c) Meetings with Tribal Advisory Council members and local communities held to discuss the project and future activities.</p>	
<p>2.5) Laboratory and library established</p> <p>2.6) Support from personnel from 3 Forest Departments on CBD</p>		<p>d) The Keystone laboratory has been established with facilities for insect taxonomy, storage of bees and plants.</p> <p>e) The books related to the project have been procured and are kept at the Keystone office.</p> <p>f) Study tour on CBD in April 2007 for 3 senior officials from the Forest Departments.</p>	
Output 3. Enhanced technical and professional skills in host country	<p><i>4 people trained on bee science for a total three weeks in UK by end of Year 2</i></p>		

Project summary	Measurable Indicators	Progress and Achievements April 2006 - March 2007	Actions required/planned for next period
through training	<p><i>4 people (3 senior staff from State Forest Department and 1 legal CBD advisor) trained for 2 weeks in UK by end Year 2</i></p> <p><i>2 persons trained at Bees for Development for a total three weeks each in UK by end of Year 2</i></p> <p><i>5 people trained for 4 weeks on livelihoods analysis and local governance by UK expert by end of Year 1</i></p> <p>Supervision of research by local staff designed, implemented and analysed at five distinct ecological sites by end Year 2.</p>		
3.1) Training by UK staff to project staffs in host country		<p>Scoping mission to elaborate field research was undertaken by Indian and UK staff in June 2006.</p> <p>“Introduction to qualitative research techniques” September 2006 which was facilitated by Dr. Janet Seeley. The training was aimed at providing a basic understanding of qualitative techniques of information generation. The training was provided to all researchers, research assistants as well as field assistants. The plan for social research activities from October to December 2006 was laid down. Discussions and development of the Livelihood methodology was undertaken during December 2006 facilitated by Dr. Janet Seeley and Prof. Adam Pain. Training manual developed.</p> <p>Bee studies : Training on pan trapping, netting and insects pinning was conducted by Mr. Stuart Roberts, University of Reading, September 2006. training manual developed.</p> <p>Designing of Ecological methods: Dr. Nicola Bradbear, Bees for development has given the training on Design of ecological study, February 2007. Training manual developed.</p>	
3.2) Training and workshops in India		<p>Social Analysis Systems workshop in Pune, Dec 2006 organised by IDRC, Canada through Academy of Development Sciences, Karjat, Maharashtra</p>	

Project summary	Measurable Indicators	Progress and Achievements April 2006 - March 2007	Actions required/planned for next period
		<p>was attended by three field staff members. Training on insect study methods, plant study methods were organized by Keystone for RAs and FAs</p> <p>Two field staff attended a session on PRA mapping in Pandalur, Nilgiris on PRA mapping Shiny Mariam Rehel (botanist) attended International Pollination Workshop at Kalakad Mundanthurai Tiger Reserve (KMTR) organized by Ashoka Trust for Research in Ecology and Environment (ATREE) between 7th and 13th February 2007. Meetings with local people to describe the approach and methods used.</p>	
Output 4. Increased awareness and policy engagement in India and UK through dissemination and advocacy	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.		
4.1.) Meetings with stakeholders (local people, forest department staff)			Meetings have been held at the research sites for local people and forest field personnel. Presentations on methodologies have been made to forestry officials and field staff. Methods have been explained to local people (and some people have accompanied teams in the field to see what they do). Dissemination of information about the bees and biodiversity to visitors of the museum, education sessions for children.
4.2) Establishment of the IBBRU at the Bee museum			
4.3) Media reports			Two articles in <i>The Hindu</i> , a national Daily Newspaper in India One article in Bees for Development Journal

Annex 2 Project's full current logframe (unchanged from the original log-frame)

Project summary	Measurable indicators	Means of verification	Important assumptions
<p>Goal</p> <p><i>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:</i></p> <p><i>The conservation of biological diversity,</i></p> <p><i>The sustainable use of its components, and</i></p> <p><i>The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources</i></p>			
<p>Purpose</p> <p><i>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.</i></p>	<p><i>A reference collection of relevant indigenous bee species established.</i></p> <p><i>A reference collection of melliferous flora established.</i></p> <p><i>Analysis of links between bees, biodiversity and forest livelihoods by Yr 3.</i></p> <p><i>Indigenous Bee and Biodiversity Resource Unit established.</i></p> <p><i>5 Field Centres, State Forest Depts and Tribal Advisory Council (TAC) strengthened by Yr 3.</i></p> <p><i>Partners trained in research methods, information systems, livelihoods analysis, local governance and mountain biodiversity by Yr 3</i></p> <p><i>Participatory capacity assessment.</i></p>	<p><i>Pollen slide reference collection</i></p> <p><i>Bee reference collection</i></p> <p><i>Plant reference collection.</i></p> <p><i>Project technical reports</i></p> <p><i>Resource Unit established, and annual progress reports</i></p> <p><i>Training reports</i></p> <p><i>Event proceedings, publications, media reports and policy documents</i></p> <p><i>Report on capacity development</i></p>	<p><i>Existing legislation remains favourable.</i></p> <p><i>That market forces do not undermine informal systems of regulation of resource extraction.</i></p> <p><i>Findings indicate that the current use and livelihood benefits are sustainable.</i></p> <p><i>Exotic bee species and/or associated pathogens are not introduced.</i></p> <p><i>Collaboration and co-operation with 3 State Forest Depts sustained.</i></p> <p><i>Other current natural conditions prevail.</i></p> <p><i>Project budget estimates hold true.</i></p>
<p>Outputs</p>			

Project summary	Measurable indicators	Means of verification	Important assumptions
A. Increased scientific and livelihood knowledge through research			
<p><i>Characterisation and science of livelihood-relevant, indigenous bee species - their taxonomy, genetics, population, habitat, and distribution (of selected species) - studied and documented.</i></p> <p><i>Data collected on habitat and melliferous flora, mapping.</i></p> <p><i>Pollination studies in both natural forest and crops.</i></p> <p><i>Livelihood studies undertaken with indigenous people, and market and trade studies on bee products.</i></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>Data (morphometric and genetic) to assist correct classification of indigenous bee species, (or placement within genera).</p> <p>A key for identification of bee species (using LUCID software).</p> <p>Data and analysis of bee diversity and abundance: population data for Apis dorsata.</p> <p><i>A catalogue and database of melliferous flora at 5 sites created (using GIS).</i></p> <p><i>Data on pollination requirement of some local crops and non-timber forest products.</i></p> <p><i>Traits analysis completed to compare data for key species collected at five sites.</i></p> <p>The role of bees in local livelihoods analysed.</p> <p>Market assessment by Yr 3.</p>	<p><i>Permanent bee reference collection established.</i></p> <p><i>Key for bee identification established.</i></p> <p><i>Permanent pollen slide library established.</i></p> <p><i>Research and survey data, genetic data and reports.</i></p> <p><i>GIS maps, electronic database, and reports.</i></p> <p><i>Published documents</i></p>	<p><i>That project partners remain committed to research and capacity building, and have appropriate expertise.</i></p> <p><i>That realistic market data is accessible.</i></p>
B. Strengthened capacities of key institutions			
<p><i>Indigenous Bee and Biodiversity Resource Unit 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</i></p>	<p><i>New staff and facilities provided to create the Indigenous Bee and Biodiversity Resource Unit within existing campus of Keystone in NBR, and at 5 field centres.</i></p> <p><i>Forest Dept personnel trained by Yr 3.</i></p> <p><i>Tribal Advisory Council trained in institutional</i></p>	<p><i>Staff complement.</i></p> <p><i>Inventory of facilities.</i></p> <p><i>Range and number of publications distributed, enquiries answered, and web pages</i></p>	<p><i>That the local partner organisation has commitment and capacity to develop the new Unit and associated centres.</i></p> <p><i>That State Forest Depts</i></p>

Project summary	Measurable indicators	Means of verification	Important assumptions
	development and local governance by end Yr 3	created/updated. Record of training events.	remain supportive to the Project
C. Enhanced technical and professional skills in host country through training			
<p>Training on bee science, mountain biodiversity with respect to CBD, and information systems undertaken in UK.</p> <p>UK technical input concerning entomological research design, methodology, livelihoods analysis and local governance provided in India.</p>	<p>4 people trained on bee science for a total three weeks in UK by end of Year 2</p> <p>4 people (3 senior staff from State Forest Department and 1 legal CBD advisor) trained for 2 weeks in UK by end Year 2</p> <p>2 persons trained at Bees for Development for a total three weeks each in UK by end of Year 2</p> <p>5 people trained for 4 weeks on livelihoods analysis and local governance by UK expert by end of Year 1</p> <p>Supervision of research by local staff designed, implemented and analysed at five distinct ecological sites by end Year 2.</p>	<p>Research Progress reports.</p> <p>Back to office reports</p> <p>Certificates</p> <p>Research protocols for five sites prepared</p>	<p>That people remain in post following training in UK.</p>
D. Increased awareness and policy engagement in India and UK through dissemination and advocacy			
<p>Stakeholder workshops held in NBR.</p> <p>Darwin Initiative Project aims and achievements explained and promoted through various forms of media in UK and India</p> <p>Policy recommendations concerning the bees - biodiversity - livelihoods linkages developed. International conferences attended.</p> <p>International workshop on Darwin Initiative Project on Indigenous Bees, Biodiversity and Livelihoods, held in India in year 3.</p>	<p>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.</p>	<p>3 Seminar reports and documented feedback.</p> <p>Number of web site hits, number of media events and documented feedback.</p> <p>Policy documents.</p> <p>Back to office reports</p> <p>Conference proceedings.</p> <p>Workshop documents and Proceedings</p>	<p>That there remains commitment to pro-poor biodiversity policies in India and UK.</p> <p>Media reports etc. reach and effectively influence target audiences.</p> <p>Stakeholders participate fully in workshops and dissemination events.</p>
Activities	Activity milestones (assumptions shown above)		
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.		

<i>Project summary</i>	<i>Measurable indicators</i>	<i>Means of verification</i>	<i>Important assumptions</i>
	Sustainable livelihood analyses, and people's biodiversity registers for indigenous communities living adjacent to 5 sites		
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		
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.		
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.		