



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**

|                                     |   |
|-------------------------------------|---|
| <b>Name:</b> Natural History Museum | <b>Address:</b> Cromwell Road, London SW7 5BD |
|-------------------------------------|---|

**2. Project title (not exceeding 10 words)**

|   |
|---|
| Developing land snail expertise in South and Southeast Asia |
|---|

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

|  |                                     |  |                |                |                  |
|--|-------------------------------------|--|----------------|----------------|------------------|
| <b>Proposed start date:</b> 1 <sup>st</sup> May 2006 | <b>Duration of project:</b> 3 years | <b>End date:</b> 30 <sup>th</sup> April 2009 |                |                |                  |
| <b>Darwin funding requested</b>                      | <b>Total</b>                        | <b>2006/07</b>                               | <b>2007/08</b> | <b>2008/09</b> | <b>2009/2010</b> |
|  | £262,657                            | £81,730                                      | £90,560        | £86,780        | £3,587           |

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

To develop the Mollusca Group at Chulalongkorn University, Thailand as a regional centre of expertise and resources on land snails. This will be a capacity building project modelled on our Darwin project *Land snail diversity in Sri Lanka* and the Darwin post-project *Land snails as models for biodiversity assessment in Sri Lanka*. We will work with partners and projects in India, Nepal, Laos, Cambodia and Vietnam based on the same model. The purpose is to establish a permanent regional centre of expertise and resources that will continue to collaborate with the NHM in providing regional support and training for land snail inventory and research, providing skills also applicable to other taxonomic groups, as a foundation for biodiversity conservation. Of particular relevance in all partner countries is the impact of forest loss and fragmentation on species survivorship and our partners in Sri Lanka will focus on monitoring snail faunal recovery in a forest restoration project that will be of relevance for conservation measures in all partner countries.

**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 |
|---------------------|-------------------------------------|---|--|
| <b>Surname</b>      | Naggs                               | Raheem  | Panha  |
| <b>Forename (s)</b> | Fred                                | Dinarzarde  | Somsak   |
| <b>Post held</b>    | Biodiversity & Conservation Officer | Researcher  | Associate Professor                                  |
| <b>Institution</b>  | Natural History Museum              | Natural History Museum  | Chulalongkorn University                             |
| <b>Department</b>   | Zoology                             | Zoology   | Biology  |

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

|   |
|---|
| In the last 12 years NHM has led on 24 DI projects working in 17 countries. |
|---|

**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)**

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**8. Please list the UK (where there are partners in addition to the applicant organisation) and host country partners that will be involved in the 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.**

**1. UK:** C. Wade 10% of time, University of Nottingham. Long-term research collaborator. Molecular investigations: bar coding new species, constructing phylogenies, Frozen Ark logistics. Not Darwin funded, extent of involvement depends on additional funding. **2. J. Chimonides** NHM Geographical Information Systems 7.5% **3. H. Taylor** NHM photographer 10% years 2 and 3. **4. Thailand:** S. Panha 30%, Chulalongkorn University, key partner involved in all stages of proposal with Chulalongkorn research group: C. Sutcharit 30%, P. Tongkerd 20%; also in Thailand at Srinakharinwirote University, P. Prasankok 10-15%, will join the Cambodian surveys; at Mahasarakam University B. Kongim 10-15% will join the Laotian surveys; fulltime assistant plus 2 new graduate students full time. **5. Sri Lanka:** R. Pethiyagoda 10%, Species Survival Commission Deputy Chair <http://www.iucn.org/themes/ssc/aboutssc/steering.htm> and Managing Trustee, Wildlife Heritage Trust (WHT), will oversee Research Associate 100%. WHT, Sri Lankan partner in previous project, will now focus on snails as indicators of forest quality in forest restoration/construction of forest corridors. Conservation measures that will be important to other project partners in the future. They will bring valuable experience to project. **6. India:** N. Aravind 100%, Research Associate <http://www.atree.org/aravind.html> , plus research assistant 100%, Ashoka Trust for Research in Ecology and the Environment (ATREE), will run the Western Ghats project. **7. Nepal:** P. Budha 100%, (Chairman), plus research assistant 100%, Centre for Biological Conservation (CBCN), Nepal, will run the Nepal project. **8. Laos, Cambodia, Vietnam.** S. Panha will be responsible for the country projects run by Chanda Vongsombaht, National University of Laos, Hang Chan Thon, Royal University of Phnom Penh, and Dang Ngoc Can, Institute of Ecology, Hanoi. The Thai group is sufficiently large, with robust institutional support, to adjust to any unexpected staff changes; likewise with WHT (M. Bahir, listed in the Stage I application, is seriously ill and unable to participate) and ATREE and to varying degrees with other partners.

**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.**

As with our Sri Lankan Darwin projects we will interact with local communities and local conservation organisations, schools and colleges, giving talks and seminars and distributing the popular field guides and project posters that will be published. Our partners have a range of previous experience, in particular ATREE in India <http://www.atree.org/> emphasise the role of communities in their projects as does CBCN in Nepal <http://cbcnepal.topcities.com/contact.htm>, and see relevant information with enclosed evidence of partnerships. Problems caused by exotic alien species of land snails in the region are largely unknown. We will identify pest snails, advise local communities and government agencies on options for controlling pests, identify what potential invasive pests should be guarded against and advise on notification systems. Most partners are and all will be in contact with appropriate government agencies and will keep NFPs informed of the project's progress. We are communicating with K. Lum, Chairperson, Coordinating Committee, ASEANET, Southeast Asian Loop of BioNet International Network and T. Whitten, Biodiversity Specialist, The World Bank; both will facilitate communication with government agencies.

#### 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 that builds on our two previous Darwin projects in Sri Lanka and is in response to requests from colleagues in South and Southeast Asia. No organisations are carrying out similar work on land snails.

**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 establish or build on national molluscan specimen reference collections, undertake taxonomic revisions, publish illustrated snail faunal guides and popular snail guides for six countries and establish databases (**Article 7, Global taxonomy initiative – 35%**). Joint research will be carried out and the project will support the use of snails as indicator species for regional conservation strategies and habitat restoration (**Articles 6, 7, 8, 12, Indicators, Forest Biodiversity, Mountain Biodiversity – 35%**). Training will be provided in country and in the UK (**Article 12, Global Taxonomy Initiative – 10%**). We will identify invasive snail species and ways to monitor and control them in the region (**Article 7, 8, Global Taxonomy Initiative, Invasive Species – 5%**). The project will promote regional and international scientific cooperation among project partners, with interested parties in Singapore and Malaysia and through ASEANET (**Article 5, 18 – 10%**). Genetic material will be contributed to frozen collections in the region and in the UK for research and conservation (**Article 9, 15, Access to Genetic Resources and Benefit-Sharing – 5%**). Country partners are communicating with CBD NFPs in Sri Lanka, India, Nepal and Thailand. Contacts with NFPs in Cambodia, Laos and Vietnam will be made at an early stage of the project.

**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.**

Thailand and India (Third National Reports 2005), Nepal and Cambodia (National Biodiversity strategies 2002) and Vietnam (Action Plan 1994) have significant objectives and priorities addressed by our project. Relevant points in reports include: **1. Vietnam:** Assessment of impacts on forest, scientific research, international cooperation, general awareness building, capacity building and training (1.2, 3.7, 4.3, 4.1, 4.2). **2. Nepal:** faunal diversity – study of invertebrate groups considered essential, assessment of community and private forestry programmes, accurate assessment of threats to forest biodiversity, strategies to conserve biodiversity including ex-situ conservation and need for gene banks, increasing awareness in all sectors, constructing biodiversity inventories, measuring and understanding forest resilience as major biodiversity habitats, addressing knowledge gaps, mobilising and involving NGOs (2.3.2, 3.3.2, 4, 5.1.10, 5.1.16, 5.2.1.5, 5.2.2.4, 5.3, 5.4, 6.2.5, 6.3.3). **3. Cambodia:** recognition of minimal knowledge of and need for studies of poorly known groups, need for monitoring of key groups, generation of awareness, education and research. Priority centre: Royal University of Phnom Penh (1.1.11, 1.2, Theme 15, priority action). **4. India:** high priority given to all CBD Articles; in particular committed to capacity building in taxonomy, identification and monitoring with Zoological Survey of India as coordinating unit. We are in regular communication with ZSI Kolkata and ATREE works closely with the Southern Regional Station in Chennai, inclusion of ATREE as the tenth national centre of excellence is underway, these are priority agencies for strengthening awareness, research and training. **4. Thailand.** Supports bilateral cooperation particularly in support of faunal taxonomy, faunal surveys, taxonomic research, monitoring and establishment of specimen reference collections; wishes to promote education and public awareness in all aspects of biodiversity and increase the number of taxonomists for all taxa and develop databases (9.1, 9.1.2, 13, 19). **6. Sri Lanka.** The key component for our project follows from the National Conservation Review, recognition of the need to conserve all remaining forests and the Report on Expanded Programme on Biological Diversity of Forests in which forest restoration and the need for establishment of forest corridors is prioritised. **7. Laos** is party to CBD by Accession but has not published a strategy or Action Plan.

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

Little is known about molluscan pest species in the region but, based on our experience in Sri Lanka, it is likely that exotic alien species of snails and slugs will be significant agricultural and horticultural pests. We will establish the extent of the problem and advise on low-cost control methods and practices that can minimise losses. The project focuses on land snails but because of the extensive damage caused to rice production by freshwater *Pomacea* we will include control of this pest and recommendations for a notification process in areas that it has not reached. Pest species will be included in our identification guides.

**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 aim is to establish snails as a group that will be included in a wide range of biodiversity studies, be used for monitoring and for developing regional conservation strategies. This will be achieved through the national projects and the regional support provided in Thailand. In each country we will establish or build on national molluscan specimen reference collections, databases, produce popular snail guides in each country, publish research in international peer reviewed journals and communicate to a wide audience through public presentations and the media. Where partners agree, we will include material in the Frozen Ark programme with material stored at the NHM and/or contribute to in country frozen collections in participating countries such as that at The Centre for Cellular and Molecular Biology at Hyderabad, India.

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

Expertise, reference collections, databases, published research and regional cooperation will be established and extended to other countries in the region. The only reasons that additional countries and institutions are not included at this stage is the need to have a manageable project and to limit expenditure but self funded participation will be invited for interested parties in Singapore and Malaysia and through ASEANET.

**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 lack of long-term national, institutional and personnel commitment, often through political instability, is a recognised problem in many developing countries. Our main partner in Thailand is considered to be a robust and secure group providing long-term stability for a lasting legacy and regional support. The extent to which project legacy will be established in all participating countries cannot be guaranteed but regional cooperation can be assured with a high level of confidence. Our expectation is that the establishment of a regional centre of molluscan expertise will lead to additional partnerships. Regional activity in molluscan work should become self sufficient but the NHM will wish to continue collaboration for the foreseeable future.

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

As in our previous projects every opportunity will be taken to promote and publicise the Darwin Initiative and the project as a Darwin project, including all media coverage. DI will be fully acknowledged in all research publications, presentations and meetings and the snail guides and project website will all carry information on the DI and the Darwin logo.

**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 will be an integral part of the project in that all participants will bring a wide range of experience and expertise that will be shared and developed throughout the project and beyond. Some already have some expertise, others more limited knowledge. We will identify where more structured training might be needed at the initial workshop, which will primarily be a training programme. All participants are professionally involved in training others. The Thais will fund two PhD students and provide undergraduate course training for a large number of students. In India ATREE will supervise one locally funded PhD student and the project work of two MSc students. The project work of two Nepalese funded MSc students will be included. Postgraduate students will be selected and assessed through local institutions with joint supervision from UK personnel. Additional training will be provided at the NHM, particularly for those participants with limited experience of using specimen collections and the resources of a major library.

**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.**

| Project summary   | Measurable Indicators  | Means of verification  | Important Assumptions   |
|---|--|--|---|
| <p><b>Goal:</b><br/> <b>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</b></p> <ul style="list-style-type: none"> <li>• the conservation of biological diversity,</li> <li>• the sustainable use of its components, and</li> <li>• the fair and equitable sharing of benefits arising out of the utilisation of genetic resources</li> </ul>   |  |  |   |
| <p><b>Purpose</b><br/>           To develop a long-term relationship between the NHM and Chulalongkorn University, establishing Chulalongkorn University as a regional centre of land snail expertise.</p>  | <p>Setting up land snail projects in South and Southeast Asia that are supported regionally and with long-term cooperation from the NHM. Establish reference collections, national databases and a regional database, provide training, develop research output with raised standards, publish local snail guides. Develop and publish conservation strategies based on snails as key indicators.</p>  | <p>Outputs from survey based projects in India, Nepal, Thailand, Laos, Cambodia and Vietnam: establishment of reference collections; publication of results in peer-reviewed journals; publication of field and other guides. Web access to regional database and other outputs.</p>   | <p>1. Political problems may limit activity in some of the associate partner countries. 2. Significant further increases in fuel prices and costs of international flights would result in adjustments to international travel arrangements.</p>  |
| <p><b>Outputs</b></p> <ol style="list-style-type: none"> <li>1. Illustrated species lists for six countries.</li> <li>2. Field guides for six countries.</li> <li>3. Taxonomic revisions.</li> <li>4. Compilation of national databases and regional database.</li> <li>5. Publication of research papers and conservation strategies.</li> <li>6. Dissemination of outputs on WWB and through media.</li> <li>7. Build specimen reference collections.</li> <li>8. <b>Contribute material to Frozen Ark – new objective</b></li> </ol> | <ol style="list-style-type: none"> <li>1. Publication of illustrated species lists for regions covered in project in India, Nepal, Thailand, Laos, Cambodia and Vietnam.</li> <li>2. Publication of six field guides. Suitable for use by schools, universities and naturalists.</li> <li>3. Publication of taxonomic revisions.</li> <li>4. Web access to regional database.</li> <li>5. Publication of research papers on distribution, faunal origins, status and conservation.</li> <li>6. Project web site, media coverage.</li> <li>7. Collections established in partner countries.</li> <li>8. Contribution of material to Frozen Ark</li> </ol> | <ol style="list-style-type: none"> <li>1. Published illustrated colour species lists.</li> <li>2. Publication of six coloured field guides.</li> <li>3/5. Submission for publication of taxonomic revisions and research papers (<b>minimum of 12 papers: revised objective from partners</b>).</li> <li>4. Database available on web.</li> <li>6. Access available to project web site; publication / presentation of media coverage.</li> <li>7. Collections held in institutes.</li> <li>8. Material held in Frozen Ark collections.</li> </ol> | <p>Collaboration with Thailand is well established and proven to be robust and reliable. Some of the subsidiary partner countries are politically unstable and adjustments may have to be made, contracting activities in some countries, expanding in others.</p> <p>Partnerships in subsidiary countries hold up.</p> |

| Activities  | Activity Milestones  | Assumptions   |
|---|--|---|
| <p>Conduct field surveys, establish reference collections, establish databases, analyse data, publish research, prepare illustrated species lists in printed and electronic form. Prepare field guides: communicate information on web and gain media coverage.</p> | <p>Year 1. Launch project with training workshop at Chulalongkorn University with international partners.<br/> Years 1 and 2: run field programs.<br/> Years 1, 2 and 3: two members of Thai group spend two months per year working on identifying material (includes Laotian, Cambodian and Vietnamese) at NHM.<br/> Year 2: Indian and Nepalese partners work up their collections in London.<br/> Year 2: publish illustrated species lists.<br/> Year 3: publish illustrated guides to snails in the Western Ghats, India, Thailand and areas covered in surveys in Nepal, Laos, Cambodia and Vietnam. Submit a minimum of twelve papers to be published in peer-reviewed journals, covering subject areas presented in proposal, including conservation, and including results from work in Sri Lanka.<br/> Database to be available on web.</p> | <p>This is an ambitious project and we recognise that capacities for participation vary greatly in different partner countries and assume that Defra will allow contraction in some areas and expansion in others if appropriate.</p> |

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

| Project implementation timetable |                   |   |
|----------------------------------|-------------------|---|
| Date                             | Financial year    | Key milestones  |
| 1.5.2006                         | Apr-Mar 2006/7    | Launch project with preparations for workshop.  |
| 14.5.2006                        |                   | Hold workshop at Chulalongkorn University, Bangkok. Training and planning sessions 5 days followed by joint fieldwork in Thailand.  |
| 6/ 2006 – 3/2007                 | Apr-Mar 2007/2008 | Commence national field surveys, setting up of reference/frozen collections and establishing databases. Commence surveys of cloud forest and forest restoration site at Agrapatna, Sri Lanka. 3 Sri Lankan workshops. |
| 6/06, 7/06                       |                   | Host two Thai researchers at NHM. Working up collections and results and preparing faunal guides.   |
| 8/06 –9/2006                     |                   | Continue field programmes   |
| 4/07 to 3/08                     | Apr-Mar 2008/2009 | Host two Thai, one Nepalese and one Indian partner for two months at NHM. Includes joint workshop session followed by working up of collections and preparation of faunal guides.                                     |
| 7/07 –8/07                       |                   | Resume field surveys, collection curation and databasing.   |
| 8/07 – 3/08                      |                   | Complete publication of all illustrated faunal lists for Western Ghats, India and survey areas in Thailand, Nepal, Cambodia, Laos and Vietnam.  |
| By April 2008                    |                   | Host two Thai partners at NHM   |
| 8/08 – 9/08                      | Apr-Mar 2008/2009 | Publish six illustrated snail guides  |
| By March 2009                    |                   | Submit minimum of twelve papers for publication in international peer-reviewed journals in subject areas on faunal diversity/conservation. Have results from work on web, including online regional database.         |
|                                  | April 2010        | Wind up project and set out legacy agenda.  |

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

| <b>PROJECT OUTPUTS</b>              |                               |  |
|-------------------------------------|-------------------------------|--|
| <b>Year/Month</b>                   | <b>Standard output number</b> | <b>Description (include numbers of people involved, publications produced, days/weeks etc.)</b>  |
| 4/2009                              | 3 x 1A                        | 2 Thai funded PhD students 1 Thai, 1 Indo-Chinese. 1 Indian funded PhD student.  |
| 4/2009                              | 4 x 2                         | 2 Nepalese funded and 2 Indian funded MSc students will work on project.   |
| 6/06; 6/07; 6/08                    | 210 x 4A                      | Minimum 25 students per year on 1week molluscan course in Bangkok.   |
|                                     | 4 x 4B                        | Minimum 25 students per 2-day course held twice a year on 'Thai Young Professional Initiative' (TYPIN) at different locations throughout Thailand.   |
| 5/06                                |                               | Training workshop for project in Bangkok.  |
| 9/07                                |                               | Training workshop: identification and use of reference collections in London   |
| not known                           |                               | Training contribution to 6 Thai Universities in Thai government sponsored University Biodiversity Consortium.  |
| 7/06;7/07;7/08                      |                               | Workshops for members of 10 Nepal Community Forest User's Committees.  |
| 6/06; 7/06                          | 150 x 6A                      | Three one day training workshops at 3 forest reserves in Sri Lanka for forest and eco tour guides under provisional title: conservation of forest diversity.   |
|                                     | 5 x 6B                        |  |
| 6/06, 9/08                          | 4+ x 7                        | Project manuals for 2 training workshops (Bangkok and London). Pest species chart and leaflet. Additional material to be determined.   |
| 5/06; 6/06; 4/07; 9/07; 4/08; 9/08. | 65 x 8                        | Bangkok workshop followed by field training in Thailand.   |
| Before 4/2009                       | 8x 9                          | Action Plans for Thailand, India, Nepal Laos, Cambodia and Vietnam. Pest status reports for Nepal and India.   |
| Before 4/2009                       | 8 x 10                        | Field Guides for Thailand, India, Nepal Laos, Cambodia and Vietnam. Regional pest guides for South Asia and Southeast Asia.  |
| By 4/2009                           | 12 x 11B                      | Minimum of 12 papers submitted to peer reviewed journals.  |
| By 4/2009                           | 7 x 12A                       | Computer databases in all partner countries.   |
| By 4/09                             | 4 x 13A                       | Collections in Nepal Laos, Cambodia and Vietnam.   |
| By 4/09                             | 2 x 13B                       | Collections in Thailand and India.   |
| 5/06                                | 8+ x 14A                      | Minimum of 7 national meetings to present findings throughout duration of project. Planning to host World Malacological Congress in Bangkok in 2010.   |
| 7/06                                | 10 x 15A                      | Minimum of two national press releases in Sri Lanka, India, Nepal and Thailand; at least one each in Laos, Cambodia and Vietnam.   |
| 7/06;7/07                           | 4 x 15B                       | At least four local press releases in India and Nepal (in English and local languages, Nepali and Kannada).  |
| 6/06                                | 15C                           |  |
|                                     | 21 x 16A                      | At least one national newsletter (30 + copies each) annually in each partner country. Annual project reports will be published in the international journal <i>Natural History Journal of Chulalongkorn University</i> (1,000 per year). |
|                                     | 3,630                         |  |
|                                     | x16B                          |  |
| 5/06                                | 1 x 17A                       | Regional network in place from start of project plus biodiversity consortium of 6 universities in Thailand.  |
|                                     | 1 x 17B                       |  |
|                                     | 2+ x 18A                      | Minimum TV programmes expected in Sri Lanka and Thailand.  |
|                                     | 4 x 19A                       | Local radio broadcasts in Nepal and India.   |
| 6/06                                | 20                            | Nepal: GPS (£100); camera (£350); pH meter (£266); laptop (£650) total: £1,366   |
| 6/06                                | 9 x 22                        | 6 plots in Sri Lanka, 3 Western Ghats, others to be determined.  |
|                                     | 23                            | Full breakdown in section 25.  |

**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.**

D. Raheem and F. Naggs will be fully involved with the field programmes, working closely with all partners compiling databases and project publications and continuously monitoring and evaluating project progress,. S. Panha's group will have particular responsibility for managing outputs for Laos, Cambodia and Vietnam.