

Submit by 5 January 2007

DARWIN INITIATIVE APPLICATION FOR GRANT ROUND 15 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 (NB: Notification of results will be by post)

Name: Alexandra Zimmermann	Address: Conservation & Science Division, North of England Zoological Society (Chester Zoo) Chester CH2 1LH, UK
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2. Project title (not exceeding 10 words)

Building capacities for mitigating human-elephant conflicts in Assam
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3. Project dates, duration and total Darwin Initiative Grant requested

Proposed start date: 1 June 2007 (Flexible)	Duration of project: 3 years	End date: 31 May 2010			
Darwin funding requested	2007/08 £ 59,250	2008/09 £ 58,800	2009/10 £ 61,700	2010/11 £---	Total £ 179,750

4. Define the purpose of the project (extracted from logframe)

To facilitate co-existence between elephants and people in Assam by addressing the immediate needs for conflict mitigation, by building the capacities of communities to protect their livelihoods, researching the patterns and dynamics of the conflict, and devising integrated strategies for its mitigation in the long term. This project is needs-driven, focussing on practical solutions to a serious conflict between biodiversity and rural people, and combining this with research and monitoring of the spatial & biological needs of elephants in order to develop sustainable land-use strategies.
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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 and co-ordinator in host country/ies
Surname	Zimmermann		Hazarika
Forename (s)	Alexandra		Nandita
Post held	Conservation Manager		Executive Director
Institution	Chester Zoo (NEZS)		EcoSystems-India
Department	Conservation Dept		-

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

Reference No	Project Leader	Title

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)

<p>Aims (50 words) The Conservation & Science Division of NEZS, which runs Chester Zoo, works to integrate <i>in situ</i> and <i>ex situ</i> conservation activities and support conservation initiatives in developing countries through partnerships, transfer of skills, training, and the sharing of access to resources.</p>
<p>Activities (50 words) NEZS uses its variety of staff skills to provide technical input into conservation projects in the UK and abroad, in areas such as: conservation breeding, endangered species management, wild animal rescue, veterinary care, re-introduction, conservation education and awareness, and particularly human-wildlife conflict work.</p>
<p>Achievements (50 words) Twice received the Queen's Award for Enterprise for conservation, education and sustainability; first UK zoo to achieve ISO14001; over 80 awards in conservation, research, education, horticulture, tourism and marketing; raised £1.8 million for 375 conservation projects in 64 countries, further supporting many with capacity building in developing countries.</p>

8. Please list the UK/collaborative (where there are partners in addition to the applicant organisation) and host country partners that will be involved, and explain their roles and responsibilities in the project. Describe the extent of their involvement at all stages, including project development. This section should illustrate the capacity of host country partners to be involved in the project. Please provide written evidence of partnerships.

<p>Partner Pygmy Hog Conservation Programme Assam, India</p>	<p>Details (including roles and responsibilities and capacity to engage with the project): The Pygmy Hog Conservation Programme (a past Darwin Initiative grant co-recipient, Ref. 15/017) provides our project with technical skills and advice for the construction and maintenance of fencing, solar-powering and construction. They also take part in our project meetings and provide valuable feedback and input. A letter of PHCP's support is enclosed with this application.</p>
<p>Partner Centre for Environmental Education (Northeast) Assam, India</p>	<p>Details (including roles and responsibilities and capacity to engage with the project): The Centre for Environmental Education (a past Darwin Initiative grant co-recipient, Ref. 06/017) will advise this project on educational aspects and work with us to produce training materials and run workshops. Their regional experience and specialisation will help ensure quality control in the educational components of this project and wide dissemination across the region. CEE has produced materials on elephant conservation, but not yet on human-elephant conflicts and related issues; our collaboration in this will therefore be mutually beneficial. A letter of CEE's support is enclosed with this application.</p>
<p>Partner Rashtriya Gram Vikas Nidhi (RGVN) Assam, India</p>	<p>Details (including roles and responsibilities and capacity to engage with the project): Rashtriya Gram Vikas Nidhi (RGVN) is a national rural development organisation engaged in extending microcredit to rural and urban communities for promotion of alternative sources of income. RGVN will assist in training for communities in how to access microcredits and develop small enterprise for the sustainable livelihoods component of this project. A letter of RGVN's support is enclosed with this application.</p>

<p>9a. Have you consulted stakeholders not already mentioned above? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If yes, please give details:</p> <p>In the pilot phase of this project we have consulted and/or collaborated with the following stakeholders:</p> <ul style="list-style-type: none"> ▪ Forest Department, Government of Assam – Chief Conservator of Forests, Wildlife Division ▪ Forest Department, Government of Assam – Divisional Forest Officers, Territorial Division ▪ Agriculture Department, Government of Assam – District Agriculture Officer ▪ Revenue Department, Government of Assam - Circle Officers ▪ Panchayat & Rural Development Department, Government of Assam - Block Development Officers ▪ Village Panchayats (village councils approved by Central Government) in project areas ▪ District Commissioners, Government of Assam in project areas ▪ Assam Remote Sensing Application Centre, Government of Assam (assisted with remote sensing in pilot phase) ▪ Defence Research Laboratory, Government of India (assisted with chilli cultivation in pilot phase) ▪ Spices Board, Government of India (assisting with cash crop training) ▪ Williamson & Magor / Khaitan Tea Estates in project areas: Rupajuli Tea Garden, Phulbari Tea Garden ▪ All other local NGOs working on elephant conservation in Assam: Aaranyak, Nature's Foster, Nature's Bonyapran, Nature's Beckon, SERDO, WWF-AREAS Programme, Wild Areas Development Trust, Dolphin Foundation.
<p>9b. Do you intend to consult other stakeholders? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If yes, please give details:</p> <p>Additional Tea estates in project area: Tarajuli, Harchura, and Adabari Tea Gardens Assam Agriculture University at Jorhat</p>
<p>9c. Have you had any (other) contact with the government not already stated? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>If yes, please give details:</p> <p>All appropriate government offices relevant to this work have already been consulted.</p>

PROJECT DETAILS

10. Please provide a Concept note (Max 800 words) - with additions highlighted

North-east India has been highlighted by expert groups such as the IUCN Asian Elephant Specialist Group as a top priority for elephant conservation, with a particular need for the mitigation of human-elephant conflict (HEC). The forests of the Himalayan foothills contain one of last remaining large elephant populations but also one of the most acutely threatened. Unsustainable extraction of forest products and slash-and-burn agriculture are fragmenting habitat, the most visible and immediate effect of which is direct conflict between elephants and people. This conflict has become an annual occurrence which results not only in loss of crops, but also destruction of houses and loss of human lives, and in turn, retaliation against elephants. An indicator of the severity of this conflict is the fact that in the past five years communities, who by religion and culture normally respect all wildlife and especially elephants (related symbolically to the deity *Ganesh*), have taken to poisoning elephants in desperate attempts to protect lives and livelihoods. The conflict in Assam appears to be one of the worst in the world, and, relative to other parts of India, receives very little funding and international attention.

Long-term strategies for elephant habitat restoration and conservation are needed, but meanwhile community tolerance levels are rapidly deteriorating. This needs to be redressed urgently so that rural communities re-gain their willingness to protect forests, biodiversity and contribute to regional conservation efforts. Our project focuses specifically on the conflict mitigation need of the larger elephant conservation challenge, while also carrying out research on elephant spatial needs in order to help find solutions for long-term land use strategies in the future. The land-use aspect of elephant conservation in this region too complex for one NGO to tackle on its own, so we have called all NGOs in the region together to form a collaborative alliance, and idea which has been well-received. Through this alliance, supplied by the research outcomes of our work and that of others in the region, we can work with government authorities to begin to plan and implement long-term solutions for elephant conservation.

Two years ago Chester Zoo (NEZS) joined forces and signed an MOU with the Assamese NGO EcoSystems-India (ESI), and in consultation with local government departments, launched a pilot project to learn more about the conflict and determine the best way towards sustainable solutions. Combining NEZS' expertise in human-wildlife conflicts and ESI's in community-based conservation, our pilot project merged practical community work (such as helping farmers

protect crops with trip-wire alarms, watchtowers and lights), with field research and GIS mapping of elephant herd movements and crop-raiding patterns. With five research assistants and around 20 community members we began to help communities protect their crops and houses, and show them the human impacts on biodiversity by involving them in our research.

The pilot phase has already shown signs of positive shift in the capacities and attitudes of communities, and has attracted great interest from other stakeholders in Assam, as well as observers in the UK such as the Zoo's members, donors, patrons and media contacts (e.g. BBC). Having now fine-tuned our approach and built local relationships and an infrastructure for our work, the foundations are set to launch a comprehensive, integrated conflict mitigation project. The project for which we hereby seek support from the Darwin Initiative, encompasses: implementation and monitoring of low-cost crop protection methods (e.g. trip-wires, electric wiring of grain stores, chilli-based deterrents, watchtowers, lights); capacity building and education (on-the-job training, educational resource materials, workshops, etc); support for supplementary livelihoods initiatives (e.g. cash crop cultivation); systematic studies of elephant spatial, behavioural and crop-raiding patterns (by visual tracking, monitoring of conflicts, and GIS mapping and analysis) and dissemination of results to other local stakeholders (via the creation of a regional HEC forum). Key in this project is that all components are fully integrated into the communities, villagers are involved in everything from constructing fences, to collecting data on elephants, to improving ideas initiated by project staff. This way, causes and effects can be fully understood, minds broadened and capacity and knowledge built in a lasting way.

UK expertise is brought to this work through the project leader's experience in human-wildlife conflict management. The other UK project staff also provide essential expertise, including GIS and elephant behaviour and identification. In this project, NEZS contributes the human-wildlife conflict expertise, GIS technical skills, and the design of research protocols, and is responsible for overall coordination, financial controlling, strategic planning and liaison with media or other external parties. ESI contributes expertise in community-based conservation and participatory management, and is responsible for the recruitment and supervision of field staff, monitoring of workplans, management of local finances, purchase of local materials and equipment, assistance with the production of reports, and dissemination of outputs within India.

11a. Is this a new initiative or a development of existing work (funded through any source)?

Please give details:

This is a development of existing work which has successfully completed a learning and pilot phase. The previous work was funded 90% by North of England Zoological Society, and 10% by the Rufford Maurice Laing Foundation.

11b. Are you aware of any other individuals/organisations/Darwin Initiative projects carrying out similar work?

X Yes No

If yes, please give details explaining similarities and differences, and explaining how your work will be additional to this work and what attempts have/will been made to co-operate with and learn lessons from such work for mutual benefits:

Human-elephant conflict is common and widespread in Asia and Africa and many organisations work on this issue. Within Assam, a number of small grassroots NGOs try to assist with HEC problems as they occur but have limited capacity to do so (e.g. Nature's Foster, Nature's Bonyaprayan, Greed Guard, Serdo and others) The Forest Department, Government of Assam, is under tremendous pressure from the public and the media to resolve HEC, but has limited human resources to devote to the matter in a focused way, therefore welcoming the assistance of NGOs. We have had excellent relations with the Forest Department, as well as District Commissioners, who are also very concerned about HEC, from the human point of view. A support letter from Assam's Chief Wildlife Warden is enclosed. The three main NGOs in Assam working on the HEC issue are WWF, Aaranyak and EcoSystems-India/Chester Zoo. We have excellent relations with all staff at Aaranyak, who carry out similar work (with slightly more emphasis on education) but work in a different part of Assam. NEZS has also funded a small elephant project of Aaranyak's in the past. Collaboration with WWF has been limited to date, but since a recent meeting to discuss a collaborative alliance, they too have responded enthusiastically to proposals for cooperation. This alliance, which is now in planning, will maximize cooperation, collaboration and learning in HEC management and research in Assam, through a framework of joint planning, joint action and regular information exchange. This, along with our individual relations with staff from other NGOs, will ensure optimal cooperation with all other projects carrying out similar work in this part of India. Further afield, we also communicate with HEC projects in south India, Sri Lanka, and Sumatra, exchanging ideas and advice by email and at conferences on technical aspects as they arise, and sending each other copies of our reports and papers. We have visited the south Indian and Sri Lankan projects and hope to exchange visits with others in the future. We do not yet have direct links with African HEC projects; it would be helpful to establish these as well as links with current Darwin elephant projects (14/014, 14/024, 15/040).

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.

India's National Biodiversity Strategy, through its state-level Biodiversity Strategy and Action Plans, has defined the loss of habitat as the most severe threat in Assam. Under India's Ministry of Environment and Forest's *Project Elephant* programme, mitigation of conflict and conservation of habitat have been accorded highest priority. Our project sites are contiguous with protected areas and Reserve Forests that support key populations of the Asian Elephant, a *Schedule I* species. Our project directly addresses the urgent need for human-elephant conflict mitigation called for by Assam's Minister of Environment, Chief Conservator of Forests and Chief Wildlife Warden, District Forest Officers, Tea estate managers and the rural communities affected. The location of our community work sites were selected by asking the senior forest officials where they most needed our help. This project will contribute to achieving key objectives of the National Biodiversity Strategy and CBD by: 1) developing local expertise to promote the protection of elephant natural habitats; 2) providing scientific and technical training to facilitate the conservation and sustainable management of key; 3) establishing a range of community based field interventions for mitigation and 4) building local knowledge, awareness and support for the protection of the species through a community-based education and outreach programme.

13a. How will the project assist the host country in its implementation of the Convention on Biological Diversity? Please rank the relevance of the project to the relevant article(s) of the CBD thematic programmes and/or cross-cutting themes by indicating percentages.

Articles	% Relevance	Themes	% Relevance
5. Co-operation	10%	Access and Benefit Sharing	30
6. General measures for Conservation and Sustainable Use	5%	Agricultural Biodiversity	-
7. Identification and Monitoring	10%	Alien Species	-
8. <i>In-situ</i> Conservation	-	Biodiversity and Tourism	-
8h. Alien Species	-	Biosafety	-
8j. Traditional Knowledge	5%	Climate Change and Biodiversity	-
9. <i>Ex-situ</i> Conservation	-	Economics, Trade and Incentives	15
10. Sustainable use of components of Biological Diversity	-	Ecosystems approach	-
11. Incentive measures	10%	Forest Biodiversity	5
12. Research and Training	30%	Global Strategy for Plant Conservation	-
13. Public education and awareness	15%	Global Taxonomy Initiative	-
14. Impact assessment and minimizing adverse impacts	-	Impact Assessment, Liability and Redress	-
15. Access to genetic resources	-	Indicators	-
16. Access to and transfer of technology	-	Inland Waters Biodiversity	-
17. Exchange of information	10%	Marine and Coastal Biodiversity	-
18. Technical and scientific co-operation	5%	Mountain Biodiversity	-
19. Handling of biotechnology and distribution of its benefits	-	Protected Areas	-
20. Financial resources	-	Public Education and Awareness	25
21. Financial mechanism	-	Sustainable Use and Biodiversity	25
22. Relationship with other international conventions	-	Traditional Knowledge, Innovations and Practices	-
23. Conference of the Parties	-		
24. Secretariat	-		
25. Subsidiary Body on Scientific, Technical and Technological advice	-		
26. Reports	-		

13b. Is any liaison proposed with the CBD national focal point in the host country? Yes No
If yes, please give details:

The proposed project will have linkages with the CBD National Focal Point, Ministry of Environment and Forests (MoEF), Government of India, through regular communication with the Assam Forest Department. The MoEF's *Project Elephant* was established in 1991 to develop short and long-term strategies to conserve the elephant and its habitat, with particular emphasis on mitigation of human-elephant conflicts (HEC). The state Forest Department's efforts to reduce conflict are governed by MoEF Project Elephant guidelines. Our project will complement the local FD's as well as district administration's efforts to reduce HEC. If the Darwin Initiative recommends a more direct liaison with the CBD National Focal Point, this can be established easily via these existing linkages.

14. If relevant, please explain how the work will contribute to sustainable livelihoods in the host country. (Max 200 words)

This project contains an important sustainable livelihoods element. In the project region, many people live directly from their crops with little or no other sources of income. Crop losses to elephants can be devastating to people, leading them to desperate measures to protect their livelihoods (e.g. poisoning and electrocuting elephants). In our pilot phase we tested the concept of assisting villages with the cultivation of cash crops for additional income, which was enthusiastically received. In the full project, we will develop this further into a structured training programme with the assistance of the *Spices Board, Government of India* (see letter of support) for the cultivation of cash crops such and provide seedlings to start their crop. Some communities have other skills which they are interested to develop (e.g. weaving, pickling), so we will team up with the India's national rural development organisation RGVN (see letter of support) and provide training, guidance and assisting with business start-ups and microcredits. This livelihoods work is linked to elephant conservation in that it will lessen the dependency on subsistence crops and help re-build willingness to protect elephant habitats.

15. 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. (max 200 words)

The impact of this project will be to create an inspirational model of how a complex human-wildlife conflict in an under-resourced region such as Assam can be tackled effectively. This will be done through an interdisciplinary and integrated approach, using community-based assistance and capacity building, supplementary livelihoods to alleviate devastation caused by elephants, restoring communities' tolerance of wildlife, instilling confidence to apply new skills and be innovative in adapting ideas, by applying sound science to researching the best option for long-term solutions and collaborating with other groups to implement these, and by training and encouraging host-country staff and students so that they may in turn later become innovative and build the capacities of others, and finally, by also bringing together all conservation groups, elephant experts and key government officials together into a cooperative alliance for the conservation of elephants and their habitats. The results of the project will be disseminated via reports, talks, posters, articles, papers, press, websites, and communication with projects in other countries. All technical products (e.g. handbook, survey protocols, training materials) will be made openly available. Illustrated talks will also be given in villages so that the return of benefit it direct even to non-literate community members.

16. How will the work leave a lasting legacy in the host country or region? (max 200 words)

The work will leave a lasting legacy by: 1) making a real difference to the resolution of a long-standing conservation conflict which is one of the highest priorities for people and government in the region; 2) acting as an model project, training key people and giving inspirations to others do pursue similar work in other areas (through an open approach emphasizing benefit sharing and exchange of information through the frameworks that the project has constructed); 3) through its collaborative framework, attracting more talent and international attention for conservation and sustainable development expertise into the region; 4) creating a succession of training and capacity building in a variety of areas, from sustainable livelihoods (thereby also connecting poverty alleviation with conservation) to conservation research skills to an access to the conservation science forum for local young professionals; and 5) leaving, on exit, an established collaborative framework for NGOs and government to work together to manage human-elephant conflicts and tackle the complex task of protecting elephant habitat

17. 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. For example, what steps have been taken to ensure the benefits of the project will continue despite any staff changes in these organisations? (max 200 words)

This project will follow a workplan in which all components have already been developed in the pilot phase, through which have acquired the local knowledge and familiarity to be able to deal with any changes and opportunities that may arise. Staff changes can be accommodated through our training plan and new recruits can be brought into the team. Communities are made aware that we will assist and show them how to assist their neighbours, but that we will later withdraw into a background guiding role. This, in turn, should encourage them to build on the training provided. For the exit strategy of the project as a whole the duration of the project will prove sufficient to create a model for other groups. Our KPIs and monitoring plan will guide us in assign to what extent our work has been a success. Monitoring also serves to check that all components have been brought to a point where they can either be closed or handed over. Having developed expertise in this type of conservation challenge, which is so common in other parts of the world, the project team may then look to offering its experience to other regions in the future.

18. How will the project be advertised as a Darwin project and in what ways will the Darwin name and logo be used? (max 100 words)

The work will be promoted as a Darwin project to Chester Zoo's 1.2 million annual visitors and membership of 28,000 via interpretation, talks, magazine, reports, and the website. All written project outputs will bear the DI logo; NEZS press staff will ensure quality control on press releases usage of the logo on any media items. TV and newspaper features are likely, the BBC having already expressed interest. Articles in magazines, e.g. by British Airways are also possible. Staff will identify the Darwin project in presentations at conference and on educational and training materials, workshops, maps, posters, news items and websites.

19. If your project includes training and development, please indicate a) who the trainees will be, b) the criteria for selection, c) what the level and content of training will be, d) how many people will be involved, e) which countries will they be from, f) how will you measure the effectiveness of the training, g) will those trained then be able to train others and h) how will trainee outcomes be monitored after the end of the training? (max 300 words)

The project will train 2 Research Assistants (RAs, selected for reliability and experience), 8 Field Assistants (FAs, nominated by village leaders on the basis of skills and enthusiasm), 30 Community Monitors and ~200 villagers/farmers (no selection, open to all), several staff from other NGOs (selected by the alliance), and assist career development for 2 graduate students (by recommendation & merit). All will be from the host country. The methods will be mostly informal and work-based, the skills learnt including processing geo-data, quality control and precision in research, questionnaire surveys and interviewing, report writing and much more. The RAs will be involved in the development of these materials and will attend conferences plus work experience visits to the UK in order to develop their capacity to become future leaders. Around 50 villagers will be trained in the crop protection measures by the RAs (who have learned these techniques during the pilot phase). The learning, however, is reciprocal, we have seen that project staff and villagers have together improved methods through dialogue about their ideas. For livelihoods, workshops and demonstrations will form the core of training methods for the villagers, with follow-up feedback sessions in smaller groups as villagers begin to put their ideas into practice. The training for staff of other NGOs will be via field visits. Training for graduate students will be guided by academic staff locally, with structured visits to the UK. The training will be evaluated through interviews to measure knowledge and attitudes at the beginning and towards the end of the programme, as well as visits to neighbouring projects to see to what extent training has expanded on its own. One indicator of training success is, for example, when a trainee has taken an idea or technique to a further level of improvement on his own initiative.

LOGICAL FRAMEWORK

20. Please enter the details of your project onto the matrix using the note at Annex C 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
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 benefits arising out of the utilisation of genetic resources 			
Purpose To facilitate the conservation of elephants by mitigating HEC in Assam through: 1) capacity building to protect communities from elephants, 2) fostering knowledge and tolerance of elephants, and 3) studying the spatial patterns of elephant herds for land-use strategies & local implementation of the CBD	Improved capacity of communities to protect crops & property from elephants. Positive attitudinal change from passive to more pro-active participation. Increased understanding of HEC patterns and causes. Improved information about elephants' movements. Increased collaboration among stakeholders. Overall decrease in HEC (both human & elephant losses).	Monitoring of communities' implementation of methods demonstrated. Sociological appraisals to measure changes in attitudes and perceptions. Feedback from communities regarding usefulness of educational material and workshops. Extent of participation by other local groups in HEC forum. Data, reports, GIS, analyses & publications. Surveys to examine change in HEC incidences.	Continued support, collaboration and interest of the communities to participate in the project's activities. Continued support from Forest Department and other local NGOs.
Outputs			
1) Capacity of focal community members to develop, maintain and adapt elephant damage control measures.	a) 8 villages actively participating in crop/house protection trials by yr 1 b) 2 people/village trained and able to train others by yr 2. c) all field staff able to collect monitoring data to scientific standard by yr 1 d) 60% or more reduction in HEC incidences by year 3.	Log of trials and their effects recorded in each village. Training reports and evaluation Monitoring data compiled and analysed to determine effects of interventions	Communities willing to learn and apply crop protection methods, and carry out trials, using provided materials for such purpose only. HEC mitigation techniques implemented correctly as demonstrated
2) Creation of a forum or alliance of local NGOs and FD working on HEC issues in the region	a) proposal agreed with local NGOs/FD by end yr 1 b) meeting with participants to agree communication methods and field exchanges in yr 1	Document outlining the objectives of the forum and regular written reports of collaborations and communications that ensue	Other local NGOs and FD willing to collaborate as per letters of intent (to follow in Stage 2).
3) Improved community attitudes and interest in reducing dependency on subsistence crops	a) participation in supplementary livelihoods initiatives, e.g. cash crop cultivation by yr 2 b) positive attitudinal change in 60% of community by yr 3.	Semi-structured interviews to measure knowledge and attitudes at project intervals. Cash crop cultivation training session reports	Community members willing to adapt practices and learn about conservation, and willing to experiment with growing alternative crops
4) Education materials, and workshops on conservation and HEC mitigation, as well as media support of the project	a) HEC mitigation handbook produced and distributed to communities by end yr 1. b) workshops held in different communities annually – yr 1-3 b) 5 or more features in local media by yr 2.	Field staff reports of villagers' feedback on handbook and workshops. Visits to neighbouring communities show whether the training is implemented.	Communities willing to receive advice and help provided by handbook and attend workshops. Media is interested to disseminate the information offered by the project
5) Information about regional elephant movement patterns and conflict hotspots, past and present, in relation to socio-economic activities, landcover and mitigation measures	a) standardized HEC rapid assessment protocol designed and in use by yr 1 b) GIS database of elephant spatial information by yr 2 c) spatial and temporal analysis of elephant movements by yr 3 d) compilation of HEC history from	Production of maps, results in reports and publications. Summary report of historical HEC data. All incidences of crop-raiding, building damage, human injury/death or killings of elephants occurring during project recorded.	Visual tracking method elephants is sufficiently accurate for the study objectives. Field assistants collect data according to procedures taught; competent use of GPS as per training

	FD records & interviews with villagers by yr 2 e) Postgraduate opportunity for an Indian student to investigate the spatial and behavioural needs of elephants by end yr 1	Student research project and products Structured exchange with a UK university for the student	FD provides historical data. Availability of a good Assamese (or other Indian) candidate to carry out the research
* 6) land-use strategy for elephant conservation in the long-term	a) elephant research results provide insights into land-use strategy options by yr 2 b) alliance works together in joint initiative to address elephant habitat protection actions in yr 2-3	Elephant conservation management plan, data and recommendations produced and discussed with government	Alliance works successfully and is able to develop ideas and plans for long-term strategy
Activities 1) Community-based crop/house protection trials and training activities	Activity milestones (summary of project implementation timetable) Design HEC rapid assessment protocol and collect baseline data for each site (yr 1). Hands-on training to construct trip wires, chilli-grease fences, etc, specific to each village (yr1). Monitor crop-raiding attempts, analyse results, adapt/improve deterrent methods, hold participatory evaluation discussions (yrs 2-3).		Assumptions Elephants continue, as in previous years, to crop-raid in the areas where trials are prepared
2) Resource and educational materials, socio-economic monitoring, communication	Research and produce handbook on HEC practical advice, distribute and initiate follow-up conversations with communities (yr 1-2). Conduct annual workshops in villages, (yr 1-3) Collect data on socio-economics and attitudes (yrs 1-3). Initiate HEC forum, propose structure for communication (yr 2)		Community members come to workshops and use the handbook provided.
3) Elephant research, GIS mapping, spatial analysis and recommendations	Review elephant research methods from pilot work (yr1). Analyse elephant movements, HEC, land cover, nutrition of crops vs forage (yr 2-3), GIS maps & spatial analysis (yr 2-3), publish results (yr 3). Produce report with land-use management recommendations (yr 3). Identify project follow-up needs (yr 3).		Visual tracking and other methods developed continues to be the most feasible and appropriate approach.

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

Project implementation timetable (NB project start date is flexible)		
Date	Financial year	Key milestones
	Apr-Mar 2007/08	
Jun 2007		Villages selected using process developed in pilot phase
Jul - Dec 2007		HEC rapid assessment survey developed and pilot-tested; baseline HEC collected from at least 50 villages
Aug 2007		System of log documentation of interventions, training activities and observations developed and started (for future reporting and paper writing)
Aug 2007		First workshop (with several villages together) on HEC mitigation measures and elephant conservation
Sep 2007		Field and community assistants trained in elephant identification and HEC incidence recording Training of FAs & RAs in data collection
Sep 2007		Crop/house protection measures (interventions) planned before elephant-crop-raiding season begins. Equipment purchased, hands-on training with villagers (e.g. trip wires, chilli repellents) completed.
Oct '07 & Mar '08		Project reporting
Nov 2007		Formal establishment of alliance for elephant conservation in Assam, with concept document prepared and MOU signed by the members. Recruitment of advisors, Forest Department & external collaborators into the forum.
Nov 2007		Preparation of HEC self-help handbook completed, translation into Assamese, printing and distribution
Dec 2007		Establishment of a core team or steering committee for the alliance, and definition of work areas, sub-groups or topic leaders
Dec 2007		Project website designed and launched
Jan 2008		First training workshop in cash crops and establishment of seedling nursery and demonstration plots
Jan 2008		Socio-economic and attitudinal survey baseline data collected to measure social impact of project
Feb 2008		First training workshop in small enterprise
Feb 2008		Identification of master's project for Assamese project staff member and enrolment in course.
Mar 2008		All-staff project review meeting in Assam
Mar 2008		Recruitment of graduate student for PhD work on elephant spatial ecology in an HEC landscape, preparation of proposal and submission to local university.
	Apr-Mar 2008/09	
Apr 2008		Working visits to UK by Assam staff
Apr 2008		Participatory evaluation meetings with villages, workshop reports
May 2008		Research plan and logistics for elephant feeding research prepared and ready for data collection
May 2008		Data collection for elephant crop raiding season 1 completed on HEC patterns, elephant movements and effects of interventions organised and initial analyses completed – to standard for scientific publication
Jun 2008		Collective strategic planning, think-tank meetings and drafting of a action plan for long-term elephant conservation and land-use planning with alliance core team
Jun 2008		Proposal accepted by university and an element of study in the UK for academic and technical training secured. Reports, dissertation and publications
Jul 2008		Education and awareness materials produced and distributed
Aug 2008		Second workshop (with several villages together) on HEC mitigation

		measures and elephant conservation
Oct '08 & Mar '09		Project reporting
Nov 2008		Interim monitoring and evaluation activities
Dec 2008		TV, radio and/or news features in India and UK
Jan 2009		2 scientific papers submitted to peer-reviewed journals
Feb 2009		Second training workshop in cash crops and establishment of seedling nursery
Mar 2009		Second training workshop in small enterprise
Mar 2009		All-staff project review meeting in Assam
	Apr-Mar 2009/10	
Apr 2009		Training visits of Assam students to UK
Apr 2009		Participatory evaluation meetings with villages, workshop reports
Jul 2009		Re-printing of HEC self-help handbook if required
May 2009		Data collection for elephant crop raiding season 2 completed on HEC patterns, elephant movements and effects of interventions organised and initial analyses completed – to standard for scientific publication
Aug 2009		GIS maps, data, statistical analysis and spatial modelling complete and ready for inclusion in scientific paper
Sep 2009		MSc project thesis submitted, and PhD project work progressing well
Oct '09 & Mar '10		Project reporting
Oct 2009		Elephant feeding ecology data collected, analysed and ready for writing up for paper
Nov 2009		TV, radio and/or news features in India and UK
Dec 2009		Returns from livelihoods training measured
Oct 2009		Written recommendation for a long-term elephant conservation and HEC management plan for the region submitted to government
Jan 2010		Socio-economic and attitudinal survey data collection to measure social impact of project at completion
Jan 2010		2 scientific papers submitted to peer-reviewed journals
Mar 2009		All-staff project exit meeting in Assam
Mar 2010		Project-end monitoring and evaluation activities

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

PROJECT OUTPUTS		
Year/Month	Standard output number (see standard output list)	Description (include numbers of people involved, publications produced, days/weeks etc.)
July '07, Mar '08 and tbd	15A, B, C & D	6 local and/or national press releases in India and UK
Aug '07 & '08, Feb & Mar '08 & '09	14A	2 workshops on HEC management, 2 workshops on sustainable/alternative livelihoods
from Aug 2007	other	Log of trials and their effects recorded in each village.
Sep 2007	6A	8 field assistants trained in elephant deterrent and protection methods
Sep 2007	6A	50 community members in turn trained by field assistants
Oct '07 & '08 Mar '08 & '09	other	Half-yearly, annual and final project reports
Nov 2007	17A	One collaboration network (an alliance for elephant conservation in NE India) established, with an MOU signed by its members
Nov 2007	10	1 practical manual for elephant damage control measures (Assamese and English versions) produced and distributed to communities
Dec 2007	7	Standardized questionnaire survey and protocol and data entry sheets

		and training of research and field assistants in data collection and quality control
Jan 2008	other	interpretation materials at Chester Zoo, featuring the work as a Darwin Project, viewable by up to 1.2 million visitors per year
Jan 2008	22	8 field plot and demonstration sites to be established by the project, for cash crop training purposes and for growing seedlings to distribute, e.g chilli plants
Mar 2008	other	1 Assamese student undertaking PhD-level research closely linked with the project
Mar 2008	6A	At least 20 community members participating in pilot sustainable livelihoods initiatives, e.g. cash crop cultivation
Mar 2008	other	2 people/village trained and able to train others
May 2008, '09, '10	other	Monitoring data compiled and analysed to determine effects of interventions
May 2008 & 2009	other	analysed dataset on HEC history and data on all incidences of crop-raiding, building damage, human injury/death or killings of elephants occurring during project recorded.
Sep 2008	6A	At least 8 villages actively participating in crop/house protection trials
Dec 2008, Nov 2009	16, B, C & D	4 local and/or national TV features about the project in India and UK
Dec 2008, Nov 2009	18C & 18D	3 or 4 local radio interviews or mentions in India and/or UK
Jan 2009, Jan 2010	11A & 11 B	4 papers in peer reviewed journals in print and submitted
Mar 2009	6A	2 or more neighbouring communities informally trained by trainees of project, in a catalysing effect of spread of interest
May 2009	12B	Comprehensive GIS database on elephant movements, spatial and statistical analysis to be enhanced from prototype in pilot project, and made openly accessible for use by India project team
Aug 2009	other	GIS data and maps of elephant dynamics in project areas; information about regional elephant movement patterns and conflict hotspots, past and present, in relation to socio-economic activities, landcover and mitigation measures
Sep 2009	2	1 MSc qualification by Assamese project staff member, with a research project closely linked to the project's aims
Oct 2009	9	HEC management recommendations and long-term strategy plan for Forest Department
Mar 2010	other	A significant (measurable) reduction of human-elephant conflicts in project villages
Mar 2010	20	£20,000 worth of physical assets to be handed over for use in Assam
Mar 2010	23	Over £170,000 contributed to the work in funds and in-kind by NEZS and the project partners over 3 years
At intervals tbd	8	30 or more weeks spent by UK staff in host country for field work, providing training, data collection/quality control and project management
Tbd, depending on opportunities	14B	participation in 3 or 4 international conferences by key project staff (UK and India) at which findings of the project will be disseminated and the project promoted as a Darwin project, also participation in training workshops run by others as relevant and beneficial

PROJECT BASED MONITORING AND EVALUATION

23. 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.

Our monitoring & evaluation plan for the project will assess progress in the project's six working areas: community capacity building, institutional capacity building & cooperation, sustainable livelihoods, education, elephant spatial research and long-term strategic planning. Doing so will allow the project leader, host country project manager and project staff (particularly in host country field staff, so that participation in this M&E becomes a component of their learning) and the Darwin staff will allow adaptive management of the project, so that any challenges or opportunities can be handled with clear understanding of their effect on the project as a whole. The method for our M&E will be surveys at project start, interim and completion, to measure communities' and field staff's knowledge, perception and opinions, plus detailed logbook documentation of actions taken (e.g. precise notes on elephant repellent trials in villages) as well as annual all-staff review meetings in the host country (with UK staff) in which we review progress, feedback, ideas and logistics. All monitoring will be done jointly by NEZS and ESI, e.g. where one partner produces a draft and the other reviews and tests it. The UK team spends time in Assam and participates in the field work regular basis, in order to fully know and understand the details of all aspects of the project. Specifically, the project-based monitoring will be achieved by evaluating KPIs such as: 1) the extent to which villages actively participate in elephant protection efforts, and their feedback on the work (assessed via attitude and opinion surveys); 2) the extent to which community members are able to use their training and pass on their knowledge to neighbouring villages (via semi-structured interviews), 3) the quality of the elephant monitoring and tracking data collected by field assistants and monitors (our pilot phase has shown an increase in quality after a short practice and learning period); 4) the establishment and maintenance of an alliance for elephant conservation in the region (joint reports and feedback); 5) the uptake of new, sustainable livelihoods initiatives by project-supported communities (reports, training materials and feedback); 6) an overall positive change in attitudes and confidence of the communities (questionnaires); 7) the extent to which the project work spreads to other areas or communities on its own (observation); 8) the production and use of an elephant damage protection self-help handbook (feedback on use) 9) participation of communities in our workshops (reports and feedback); 10) interest by the press in our project (number of actual vs expected media features) 11) the production of standardized research and monitoring protocols and data collection sheets (HEC rapid assessment survey, geospatial data entry, elephant herd tracking, etc); 12) the uptake of elephant spatial ecology in an HEC landscape by a PhD student. Finally, at the end of the project there will be an all-staff wrap-up meeting in the host country, to discuss and summarize the overall achievements of the project (considering impact and legacy) and implement the exit strategy.