



17-024



DARWIN200

Submit by Monday 1 December 2008

### DARWIN INITIATIVE APPLICATION FOR GRANT FOR ROUND 16: STAGE 2

Please read the Guidance Notes before completing this form. Where no word limits are given, the size of the box is a guide to the amount of information required. Information to be extracted to the database is highlighted blue.

#### 1. Name and address of organisation (NB: Notification of results will be by post)

<b>Name:</b> ALEXANDRA ZIMMERMANN	<b>Address:</b> Conservation & Science Division, North of England Zoological Society (Chester Zoo), Chester CH2 1LH, a.zimmermann@chesterzoo.org
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#### 2. Project title (not exceeding 10 words)

Securing Human–Elephant Coexistence in Sumatra

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

<b>Proposed start date:</b> 1 April 2009		<b>Duration of project:</b> 3 years		<b>End date:</b> 31 March 2012	
<b>Darwin funding requested</b>	<b>2009/10</b> £98,800	<b>2010/11</b> £94,600	<b>2011/2012</b> £91,950	<b>2012/13</b> £ --	<b>Total</b> £285,350

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

To identify key elephant populations in Sumatra, assess their status using CITES/MIKE survey methods; protect these key populations from poaching, habitat loss/degradation, and human–elephant conflict (HEC) while improving farmers' livelihoods; and to train Indonesian nationals in HEC mitigation methods and CITES/MIKE survey methods to help the Government of Indonesia meet its obligations under CITES and the CBD.

#### 5. Principals in project. Please provide a one page CV for each of these named individuals. You may copy and paste this table if you need to provide details of more than one overseas project partner.

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
<b>Surname</b>	Zimmermann	Hedges	Gunaryadi
<b>Forename (s)</b>	Alexandra	Simon	Donny
<b>Post held</b>	Conservation Manager	Asian Elephant Coordinator	WCS–IP Sumatran Elephant Coordinator
<b>Institution (if different to above)</b>	North of England Zoological Society	Wildlife Conservation Society (c/o Zoological Society of London)	Wildlife Conservation Society – Indonesia Program
<b>Department</b>	Conservation Department	Asia Program	N/A
<b>Telephone</b>			
<b>Email</b>			

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

Reference No	Project Leader	Title
16-007	Alexandra Zimmermann	Building capacities for human–elephant conflict mitigation in Assam, India

**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><b>Aims (50 words)</b> The Conservation &amp; 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><b>Activities (50 words)</b> 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><b>Achievements (50 words)</b> 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. Please copy/delete boxes for more or fewer partnerships.**

<p><b>Partner Name:</b></p> <p>Forestry Department, Directorate General of Forest Protection and Nature Conservation (‘PHKA’)</p>	<p><b>Details (including roles and responsibilities and capacity to engage with the project):</b></p> <p>PHKA is responsible for managing and protecting national parks, nature reserves, and protection forests in Indonesia. We (Hedges, WCS–IP; see below) have worked closely with park rangers, the heads of national parks, and HQ staff on elephant and tiger conservation since 1998. As the lead national agency responsible for elephant conservation, PHKA will be the target of much of the training and other capacity building work; raising such institutional capacity is a key tool for project sustainability. PHKA staff will also participate in the project’s surveys, human–elephant conflict mitigation activities, and law enforcement activities (including habitat protection and anti-poaching activities). A letter of support from PHKA is enclosed with this application.</p>
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<b>Partner Name:</b>  Wildlife Conservation Society – Indonesia Program (WCS–IP):	<b>Details (including roles and responsibilities and capacity to engage with the project):</b>  As the leading NGO in Sumatra developing, testing, and promoting sustainable human–elephant conflict and poaching reduction methods, WCS–IP will be a key in-country partner that will provide local knowledge technical advice, project field staff, and general facilitation.  WCS has been working in Indonesia since 1960. WCS has operated projects on six islands ranging from population and threats assessments of endangered cockatoos to studies of hunting management issues and the impact of logging on wildlife. WCS–IP has worked on Sumatra since 1995, operates a research and training station in Bukit Barisan Selatan National Park, and has been involved in elephant conservation work in Sumatra since late 1999.  WCS holds a Memorandum of Understanding with the Indonesian conservation agency (PHKA) in the Ministry of Forestry. Under this agreement, WCS–IP conducts applied conservation projects in collaboration with PHKA, and advises on the conservation of endangered species and the development of wildlife management strategies. In addition, WCS–IP has created a Wildlife Crimes Unit that assists local protection agencies curb wildlife trade in Sumatra. WCS–IP maintains an office in Tanjung Karang in Sumatra’s Lampung Province, and has field base camps at Bukit Barisan Selatan National Park headquarters and near Way Kambas National Park. A letter of support from WCS-IP is enclosed with this application.
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<b>9a. Have you consulted stakeholders not already mentioned above?</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>If yes, please give details:</b> We have already consulted with the East Lampung District Authority (local government) in Sumatra and the local community self-help groups (KSM) in Lestari and Asri Mandiri (also in Lampung Province) to discuss human–elephant conflict reduction work and our other proposed elephant conservation activities. Letters of support from these three organizations accompany this proposal.	
<b>9b. Do you intend to consult other stakeholders?</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>yes, please give details:</b> In addition to (i) our collaborative work with the central Indonesian forest and wildlife conservation authorities (PHKA; who are key host country partners) and (ii) the consultations already held with local government and local community stakeholders referred to above, We will be consulting (and collaborating) with local government and local community stakeholders in all the other provinces of Sumatra as the project develops.	
<b>9c. Have you had any (other) contact with the government not already stated?</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>If yes, please give details:</b> N/A.	
<b>9d. Is any liaison proposed with the CBD/CMS/CITES focal point in the host country?</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>If yes, please give details:</b> We plan to engage in frequent liaison with Indonesian Government’s CITES Management Authority (which is within PHKA) and the CITES / Monitoring the Illegal Killing of Elephants (MIKE) programme officers in Indonesia (who are PHKA staff) to ensure that our project helps PHKA, and the Indonesian authorities more generally, meet their obligations as signatories to CITES. Less frequent / specific interactions are proposed with the CBD focal point in the Deputy of Nature Conservation and Environmental Impact Control, in the Ministry of the Environment.	

**PROJECT DETAILS****10. Please provide a Concept note (Max 1,000 words) (repeat from Stage 1, with changes highlighted)**

Throughout their range, Asian elephants, which are a key species for ecosystem-based approaches to conservation, are in decline due to poaching, habitat loss, and human–elephant conflict (HEC). All of these threats are apparent on the Indonesian island of Sumatra, one of the most important areas for Asian elephants outside of India.

Surveys in the mid-1980s found that elephants persisted in 44 populations on Sumatra, 12 of which were in Lampung Province. However, a 2001/02 survey of Lampung found that habitat conversion for agriculture and the resultant HEC had been so extensive that only three populations remained. Fortunately the province’s two national parks, Bukit Barisan Selatan and Way Kambas, still contained elephant populations of international importance.

Outside of Lampung, the current status of most elephant populations is unknown. However, we do know that many of the remaining elephant populations are threatened by habitat loss, poaching, and HEC-driven elephant captures and retaliatory actions (including killing of elephants) by farmers whose crops are raided by elephants. In some parts of Sumatra, habitat loss is the largest threat to elephants, in other parts, especially around the existing relatively secure protected areas, HEC-driven captures and retaliatory killings, as well as poaching, are larger threats. Realistically, it is these latter populations that have a long-term future, not the populations that are in areas scheduled for large-scale habitat conversion (see the Hedges et al. (2005) reference cited below). Our project will therefore focus on identifying those elephant populations where conservation action will make the most difference, not the likely ‘lost causes’, and then implementing measures to protect them, while simultaneously improving farmers’ food security and livelihoods by reducing the impact of HEC, which will foster goodwill towards protected areas.

Furthermore, the Indonesian Government has obligations as a signatory to the CBD and CITES to monitor its elephant populations and the threats to those populations as part of the CITES Monitoring the Illegal Killing of Elephants (MIKE) programme but does not currently have the capacity to conduct this work to international standards.

We will address these pressing needs by conducting a three-year Sumatra-wide elephant survey and threat mitigation project. We will build on the experience gained during the extensive previous work on HEC reduction, rural livelihood protection, and elephant population monitoring conducted by project co-leaders, Zimmermann and Hedges, in Assam and Sumatra respectively (see Darwin Project 16-007 and the Hedges *et al.* publications cited here). Specific project objectives are:

- 1) identify key elephant populations and HEC “hotspots” using a combination of desk-based map studies and field work, including MIKE-approved survey methods based on dung counts and innovative faecal DNA capture–recapture methods (see Hedges & Lawson. 2006. *Dung Survey Standards for the MIKE Programme*. CITES/MIKE Central Coordinating Unit, Nairobi, Kenya);
- 2) protect these key Sumatran elephant populations by promoting measures to reduce HEC, poaching, and habitat loss while working with communities to protect local peoples’ crops using both novel and proven methods; and
- 3) build capacity by PHKA staff in: (a) the design and conduct of elephant surveys using modern peer-reviewed sampling-based survey methods approved by CITES/MIKE; (b) the implementation of an HEC, poaching, and habitat loss reduction strategy, using methods that have proven effective elsewhere; and (c) provide opportunities for Indonesian conservation biologists to study for graduate degrees in the UK.

We have demonstrated the feasibility of large-scale elephant surveys in Sumatra through the successful completion of a Lampung Province-wide survey (see Hedges et al. 2005. Distribution, status, and conservation needs of Asian elephants (*Elephas maximus*) in Lampung Province, Sumatra, Indonesia. *Biological Conservation* 124: 35–48). In addition, we have developed low-cost HEC mitigation tools at Lampung’s Way Kambas NP and in Assam in India (see Darwin Project 16-007 and the Hedges & Gunaryadi paper cited below), and we are now at a stage where best practice has been identified and can be promoted at new locations with a good understanding of

the conditions that are needed for success. Indeed, we recently demonstrated that community-based crop-guarding using low-tech tools (both novel and traditional) can successfully repel elephant raids: elephants were repelled on 91%, 88%, and 80% occasions (Hedges & Gunaryadi, in press. Reducing Human–elephant Conflict: Do Chillies Help Deter Elephants from Entering Crop Fields? *Oryx*). We are therefore in an ideal position to extend this survey and threat mitigation work to Sumatra’s other provinces, where we will implement an ecosystem-based elephant conservation strategy that fully recognises the need to include local people and protect their livelihoods. The HEC reduction work will incorporate the low-tech methods already shown to work but we will also add (and test) other crop defences such as burning chilli-dung to produce a repellent smoke, which we have developed in Assam.

Our partners in Indonesia, WCS-IP, have also worked to address the threat of poaching and habitat loss (particularly illegal agricultural encroachments into elephant habitat). Since 2002, WCS-IP has operated a ‘Wildlife Crimes Unit’ (WCU) in Lampung Province as part of its Indonesia-wide Wildlife Crime Network Program. The WCU is a collaboration between WCS-IP, PHKA, local NGOs, journalists, and the police. The strength of the WCU is its collaborative nature. The vast majority of activities have been conducted by members of other NGOs within the alliance, PHKA, and an army of willing volunteers. As such, it is a model for what can be achieved – and sustained – with little external financial support. In the coming three years, we will extend the WCU’s activities working in partnership with PHKA. We will focus on reducing poaching and illegal agricultural encroachment through the direct actions of the WCU and on larger-scale habitat loss through advocacy, where appropriate.

NEZS will be responsible for project development/coordination and providing technical expertise for the HEC and training components of the project. WCS-IP will be responsible for project management in Sumatra and providing technical expertise for the population survey and HEC assessment and mitigation components. PHKA will share project management with WCS-IP and be responsible for providing government staff for the survey, threat mitigation, and training components.

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

**Please give details:**

This project is a development of previous work on human–elephant conflict (HEC) reduction, rural livelihood protection, and elephant population monitoring conducted by WCS-IP and by project co-leaders, A. Zimmermann and S. Hedges, in Assam and Sumatra respectively (see Darwin Project 16-007 and the Hedges et al. publications cited in section 10). More specifically, as part of this previous work, we have developed low-cost HEC mitigation and livelihood protection tools at Lampung’s Way Kambas NP and in Assam in India. Previous work by WCS-IP and Hedges in Sumatra was funded by the US Fish & Wildlife Service and National Geographic and both of these donors will be approached for matching funds for this proposal. However, although this project is a development of existing work (which showed what worked and what was feasible at province-wide scales), what is new about this project (and thus what will be the Darwin Initiative’s particular contribution) is the large-scale implementation of the project’s leaders successful work elsewhere (in Assam and in Sumatra’s Lampung Province) at key sites across the whole of Sumatra.

**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 been/will be made to co-operate with and learn lessons from such work for mutual benefits:**

- We will work in close collaboration with Darwin Project 16-007 “Building Capacities for human–elephant conflict mitigation in Assam” which has particular experience in community-based conflict mitigation and livelihoods approaches. We plan to have several host-country staff exchanges between these two projects; the Assam project will assist the Sumatra project in community-based work and the Sumatra project helping the Assam



project improve its scientific monitoring. Such exchanges are excellent for the transfer of skills (and to reduce the “reinvention of wheels”) and for building the confidence and experience of field staff, who are ultimately the key to making projects like these self-sustaining.

- We will also pursue joint initiatives, exchanges, or at the minimum regular communication with Darwin project 15-040 “Building capacity to alleviate human–elephant conflict in north Kenya”, with whose project leader we have already explored ideas.
- Our Sumatra-wide project will liaise with other, more localized, HEC mitigation projects in Sumatra run by WWF, Fauna & Flora International (FFI), and the International Elephant Foundation (IEF). These other projects have, to date, adopted a less evidence-based approach to that of WCS–IP (*cf.* the Hedges & Gunaryadi publication referred to in section 10) and have tended to focus on Rapid Response Team approaches to HEC mitigation, which we believe are too dependent on external funding and thus less sustainable than the community-based methods we have tested, successfully, in Sumatra and Assam. We will however collaborate with these other projects wherever possible in order to share experiences and work together towards a common goal of reducing HEC in Sumatra.
- Project co-leader Simon Hedges is the Co-chair of the IUCN/SSC Asian Elephant Specialist Group (AsESG) which is organizing (in China in July 2009) a symposium on HEC mitigation methods. The symposium will focus on what has been tried in Asia, what worked, what did not, and why (if known). The symposium will produce a frequently-updated (‘living document’) review publication on HEC mitigation, which will be maintained on the AsESG website. Our project will participate in the AsESG symposium with the intention of both learning from others’ experiences and contributing our experiences of successful HEC mitigation in Sumatra and Assam.

**12. Please indicate which of the following biodiversity conventions your project will contribute to: -**

At least one must be selected.

- Only indicate the conventions that your project is directly contributing to.

- No additional significance will be ascribed for projects that report contributions to more than one convention

Convention on Biological Diversity (CBD)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
CITES	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Convention on Migratory Species (CMS)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No (only African Elephant is listed in CMS)

**What problem is this project addressing and how was it identified? (150 words)**

Sumatra’s elephants are under threat as a result of habitat loss, human–elephant conflict (HEC), poaching, and ignorance about the distribution and status of elephant populations (which hinders informed management). There is thus a clear need to identify remaining key populations and implement measures to protect them and their habitat, while simultaneously improving farmers’ livelihood security by reducing the impact of HEC. The status of elephant populations also needs to be monitored to determine whether these conservation interventions are successful. Furthermore, the Indonesian Government has obligations as a signatory to the CBD and CITES to monitor its elephant populations and the threats to those populations as part of the CITES Monitoring the Illegal Killing of Elephants (MIKE) programme but currently lacks the capacity to conduct this work to the required standards. These problems were identified during previous work on Sumatra’s elephants (see publications cited in section 10).

**What will change as a result of this project? (150 words)**

Key elephant populations will be identified using a combination of desk-based map reviews and survey work using methods shown to work in Sumatra and elsewhere (see citations in section 10). Human–elephant conflict (HEC) will be reduced significantly at a large number of key elephant sites using techniques already shown to work at test sites in Sumatra’s Lampung Province (see section 10). Poaching and illegal encroachment into elephant habitat (habitat loss) will be reduced significantly as a result of the Wildlife Crime Units’ collaborative work with PHKA, local NGOs, the

police, and the judiciary. The capacity of PHKA's staff to implement elephant conservation work and meet their obligations under the CBD and CITES (and especially the CITES Monitoring the Illegal Killing of Elephants (MIKE) programme) will be improved significantly and demonstrably.

**Why is the project important for the conservation of biodiversity? (150 words)**

Elephants are keystone species responsible for shaping the ecosystems in which they live through a combination of seed predation and dispersal, significant habitat alteration (e.g. creating and maintaining clearings, mineral licks, and water sources). Without elephants, the forests and other habitat types they occupy would be very different – and less rich – places with numerous negative implications for other species. Elephants are, therefore, highly important species for ecosystem-based approaches to conservation, but unfortunately elephants are in decline due to poaching, habitat loss, and human–elephant conflict. All of these threats are very apparent on the Indonesian island of Sumatra, one of the most important areas for Asian elephants outside of India. Furthermore, Sumatra's elephants belong to a distinct subspecies found nowhere else in Asia and they are, therefore, of particularly high importance for the conservation of elephant diversity.

**How does this relate to one or more of the biodiversity conventions? (150 words)**

The Indonesian Government has obligations as a signatory to the CBD and CITES to manage and monitor its elephant populations and the threats to those populations, not least as part of the CITES Monitoring the Illegal Killing of Elephants (MIKE) programme. Currently Indonesian government agencies lack the capacity to conduct this work to the required standards and so this project will focus on capacity-building in the agency (PHKA) most responsible for implementing elephant-conservation-related activities under the CBD and CITES.

**13. How will the results of the project be disseminated; how will the project be advertised as a Darwin project and in what ways will the Darwin name and logo be used? (max 200 words)**

The work will be promoted as a Darwin project to Chester Zoo's 1.2 million annual visitors and its membership of 28,000 via interpretative materials, talks, magazine articles, reports, scientific publications, and the zoo's website. All written project outputs will bear the Darwin logo; NEZS press staff will ensure quality control on press releases and the use of the Darwin logo on any media items. Local newspaper articles/features and articles in nature magazines in the UK are likely. Project staff will identify the Darwin project in presentations at conferences and workshops, and on educational and training materials, maps, posters, news items, and websites. WCS–IP will also promote the work as a Darwin project in Indonesia, and globally, through a combination of interpretative materials at WCS offices and other sites, talks, magazine articles, reports/scientific publications, and WCS-related websites. In addition, the Darwin logo will be used on project vehicles in Sumatra.

**14. What will be the long term benefits of the project in the host country or region and have you identified any potential problems to achieving these benefits? (max 200 words)**

- Key Sumatran elephant populations will have been identified and baseline data on their status gathered; this will facilitate evidence-based conservation in the long-term because it will allow conservation interventions to be judged against their impact on elephant population status.
- Human–elephant conflict (HEC) will be reduced significantly at a large number of key elephant sites, which will, in the long-term, foster goodwill towards elephants and their habitat in the local communities who live alongside elephants.
- Poaching and illegal habitat loss will be reduced significantly as a result of the Wildlife Crime Units' collaborative work with PHKA, local NGOs, the police, and the judiciary, thus helping provide long-term security for Sumatran elephant populations.
- The capacity of the Government of Indonesia's staff (in PHKA) to implement elephant

conservation work and meet their obligations under the CBD and CITES (especially the MIKE programme) will be improved significantly and demonstrably. Thus, in the long-term, PHKA will be able to conduct elephant conservation projects with much reduced external support as well as be in a better position to engage with partners (NGOs, other governments, etc.) nationally and internationally.

- Constraints/assumptions that may affect achieving these benefits are identified in the logframe.

**15. State whether or not the project will reach a stable and sustainable end point. If the project is not discrete, but is part of a progressive approach, give details of the exit strategy and show how relevant activities will be continued to secure the benefits from the project. Where individuals receive advanced training, for example, what will happen should that individual leave? (Max 200 words)**

We will emphasize deployment of community-based HEC mitigation methods, rather than methods that rely on external support. We anticipate therefore that the majority of villages in HEC “hotspots” will have the knowledge and tools necessary to continue HEC mitigation work unaided at project’s end. For the Wildlife Crimes Unit, which will address poaching and habitat loss issues, we anticipate that the associated Wildlife Crimes Network Program (to which the WCS belongs) will continue to be conducted by members of other NGOs within the alliance, PHKA, and an army of willing volunteers. For the monitoring and law enforcement components, a cohort of PHKA staff will be trained so that they will be able to conduct monitoring in the future with reduced levels of external support. Nevertheless, such monitoring is expensive and so we anticipate extending the project to help PHKA teams return to key sites where baseline data on elephant status was gathered to assess the impacts of our interventions. 150 PHKA staff will be trained and the majority are unlikely to leave, as they have already invested in careers in this line of work: we expect, therefore, that at least 90% of our trainees to stay with the project.

**16. If your project includes training and development, please indicate how you will assess the training needs in relation to the overall purpose of the project. Who are the target groups? How will the training be delivered? What skills and knowledge do you expect the beneficiaries to obtain. How will you measure training effectiveness. (max 300 words)**

You should address each of these points.

A training needs assessment will be conducted as a first step, in collaboration with PHKA staff and based on WCS–IP’s extensive experience of working in Sumatra. Thus, both project staff and their PHKA counterparts will identify in detail precisely what training is needed for PHKA staff and other local partners (e.g. local communities) to conduct: (i) elephant population monitoring (especially that required under the CITES MIKE programme); (ii) human–elephant conflict (HEC) assessments; (iii) implement HEC mitigation measures; and (iv) law enforcement activities and law enforcement monitoring (LEM) to reduce poaching and habitat loss to illegal encroachment. (LEM work is also an integral part of the CITES MIKE programme.)

The target groups for training will be PHKA staff including national park rangers, local community members (especially farmers), and newly-hired additional WCS-IP staff (i.e. those staff hired for this project). Training will be delivered through a combination of classroom sessions and practical field exercises plus ‘on-the-job’ training throughout the project implementation period. The practical exercises will focus on providing knowledge about, and skills in: elephant survey methods, HEC assessment/mitigation methods, and law enforcement work. (Hedges, Gunaryadi, et al. have experience of running training courses for the CITES MIKE programme.)

We will also pursue an opportunity for an Indonesian project staff member (Gunaryadi) to take a MSc course in the UK. The training will be assessed by use of before and after training questionnaires, testing of participants’ performance during practical exercises, and the ongoing evaluation of participants’ abilities and performance ‘on-the-job’. In addition, the successful completion of a UK-based MSc by Gunaryadi will also be an indicator of training effectiveness.



**LOGICAL FRAMEWORK**

17. Please enter the details of your project onto the matrix using the note at Annex 3 of the Guidance Note. This should not have substantially changed from the Logical Framework submitted with your Stage 1 application. Please highlight any changes. (Use no smaller than Arial 10 pt)

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<b>Goal:</b> Effective contribution in support of the implementation of the objectives of the Convention on Biological Diversity (CBD), the Convention on Trade in Endangered Species (CITES), and the Convention on the Conservation of Migratory Species (CMS), as well as related targets set by countries rich in biodiversity but constrained in resources.			
<b>Sub-Goal:</b> To reduce the threat to Asian elephants in Sumatra from human–elephant conflict, illegal killing, and habitat loss and to build capacity in the agencies responsible for elephant management especially with respect to CITES and CBD.	Reduction in illegal killing and captures, and habitat loss; reduced rates of human death and injury resulting from conflict; reduced crop raiding rates and improved rural livelihoods in conflict areas. Baseline surveys completed at key elephant sites across Sumatra to facilitate future population monitoring.	The project will establish the systems required to monitor elephant populations and assess the short and long term impact of human–elephant conflict and other threats to Sumatra’s elephants. Currently no such system exists.	
<b>Purpose</b> To identify key elephant populations on Sumatra, assess their status using CITES/MIKE survey methods; protect these key populations from poaching, habitat loss/degradation, and human–elephant conflict (HEC) while improving farmers’ livelihoods; and to train Indonesian nationals in HEC mitigation methods and CITES/MIKE survey methods to help the Government of Indonesia meet its obligations under CITES and the CBD.	1. Map showing all extant elephant populations on Sumatra, with indicators of population size, extent of HEC, and threat level. 2. Majority of villages in HEC “hotspots” report major reduction in levels of HEC. 3. Law enforcement reports show reduced rates of illegal killing and habitat encroachment. 4. Large cohort of Indonesian staff trained in CITES/MIKE survey and law enforcement methods, and HEC assessment & mitigation. 5. Sumatran elephant management plan drafted.	1-2. Dung count and faecal DNA based capture–recapture surveys; sampling-based HEC incident rate surveys; sampling-based measures of crop harvest rates; questionnaire based surveys in villages; and District Forestry Dept reports. 3. Law enforcement monitoring (LEM) reports, habitat encroachment data forms, and carcass report forms. 4. Reports on workshops; workshop and on the job training participants’ evaluation forms. 5. Management plan disseminated	1. Government policies (especially forestry, agriculture, and law enforcement) remain supportive of species conservation, protected area management, and wildlife crime prevention. 2. Goodwill between PHKA, WCS-IP, and NEZS maintained for project duration.
<b>Outputs</b> 1. Survey data on elephant distribution and status and HEC levels produced and disseminated (including to the CITES/MIKE Secretariat).	1. Baseline data on elephant population distribution and status for all Sumatran provinces available by end of year 3 (ca. 2 provinces per year).	1. Site-based and annual survey reports, academic papers in peer-reviewed journals, presentations at national and international conferences, plus occasional popular media articles.	1a. Goodwill between PHKA, WCS-IP, and NEZS maintained for project duration. 1b. Survey teams and PHKA trainees remain available for project duration.
2. Human–elephant conflict reduced and farmers’ livelihoods improved.	2a. HEC reduction plans and guidance material produced for 20 HEC “hotspots” by end of year 2, revised and extended to 30 by end yr 3. 2b. Significant reduction in measured	2a. Agreements and HEC reduction plans and guidance handbook checked and approved by village and provincial authorities. 2b. Sampling-based surveys of	2. Co-operative relations between villagers and NEZS, PHKA, and WCS-IP can be developed and maintained to ensure effective and coordinated HEC reduction teams in all provinces.

	crop raiding rates and improved harvest rates at the majority of the HEC “hotspots”.	HEC rates and crop harvest yields.	
3. Illegal killing and capture of elephants and other illegal activities (especially encroachment) in key areas reduced.	3a. Significant reduction in elephant deaths due to illegal activities. 3b. Significant reduction in illegal captures of elephants. 3c. Significant reduction in indices of illegal activities in key elephant areas.	3. Wildlife Crimes Unit reports plus site-based and annual survey reports, academic papers in peer-reviewed journals, presentations at national and international conferences.	3a. PHKA, law enforcement agencies, journalists, and local NGOs remain supportive of Wildlife Crimes Unit. 3b. Goodwill between PHKA, WCS-IP, and NEZS maintained for project duration.
4. Improved capacity for cooperative management of Sumatran elephant conservation and HEC reduction by the Indonesian Government and local NGOs.	4a. 150 PHKA staff trained in technical aspects of elephant survey design and implementation by year 3. 4b. 600 villagers from 30 HEC “hotspot” villages trained in sustainable HEC reduction methods by end of year 3. 4c. Indonesian student completes UK-based MSc by end of year 3.	4a. PHKA training workshop reports; evaluation of trainees’ performance. 4b. Report on, and evaluation of, cooperative village training mini-workshops. 4c. Successful completion of a UK-based MSc by Indonesian student associated with the project.	4a. Adequate numbers of Indonesian government and local NGO trainees are available to form elephant and HEC survey teams. 4b. Adequate numbers of villagers available and willing to participate in HEC reduction training workshops. 4c. Student performance on MSc course reaches required standard.
<p><b>Activities</b> (details in workplan)</p> <p>1.1 Desk-based map study to identify key (priority) survey sites for elephant population and HEC assessments (Output 1), following training under Activity 1.1.</p> <p>1.2 Deployment of elephant population and HEC survey teams in areas identified under activity 2.1 (Output 1).</p> <p>2.1 HEC reduction plans and guidance handbooks prepared for HEC “hotspots” (Output 2).</p> <p>2.2 HEC reduction plans implemented at HEC “hotspots” (Output 2), following training under Activity 1.2.</p> <p>3.1 Law enforcement patrols by PHKA and WCS–IP staff in key/priority sites (Output 3), following training under Activity 1.1.</p> <p>3.2 Deployment of Wildlife Crimes Unit staff throughout Sumatra (Output 3), following training under Activity 1.1.</p> <p>4.1 Workshops and ‘on-the-job’ training in CITES MIKE approved standard elephant population monitoring methods, HEC assessment and reduction methods, and law enforcement (including related to habitat loss) and law enforcement monitoring (LEM) provided for PHKA staff and newly hired WCS–IP project staff at national and provincial levels (Output 4).</p> <p>4.2 Public awareness and information dissemination activities in support of protected areas and elephant conservation.</p> <p>4.3 Training in HEC reduction methods provided for villagers in HEC “hotspots” at participatory mini-workshops at the district and site levels (Output 4).</p> <p>4.4 Indonesian student attends UK university (Output 4).</p> <p>4.5 Training in HEC reduction methods provided for villagers in HEC “hotspots” at participatory mini-workshops at the district and site levels (Output 4).</p> <p>4.6 Indonesian student attends UK university (Output 4).</p> <p>4.7 Sumatran Elephant Management Plan written in collaboration with PHKA and other in-country partners.</p>			
<p><b>Monitoring activities:</b></p> <p>1. Dung count and faecal DNA based capture–recapture population surveys to provide baseline data against which all interventions can be assessed.</p> <p>2. Remote sensing based monitoring of elephant habitat.</p> <p>3. Sampling-based HEC incident rate surveys, sampling-based measures of crop harvest rates, questionnaire based surveys in villages, and District Forestry Dept reports against which HEC reduction interventions can be assessed.</p> <p>4. Compilation of law enforcement monitoring reports, habitat encroachment data forms, and carcass report forms.</p> <p>5. Workshop and ‘on-the-job’ training participants’ evaluation forms to allow us to monitor progress with our training and capacity-building aims.</p>			

18. Provide a project implementation timetable that shows the key milestones in project activities. Complete the following table as appropriate to describe the intended workplan for your project.

Activity	Months	Year 1				Year 2				Year 3			
		1	2	3	4	1	2	3	4	1	2	3	4
1.1 Desk-based map study to identify key (priority) survey sites for elephant population and HEC assessments (Output 1), following training under Activity 1.1.	2	X											
1.2 Deployment of elephant population and HEC survey teams in areas identified under activity 2.1 (Output 1).	24			X	X	X	X	X	X	X	X		
2.1 HEC reduction plans and guidance handbooks prepared for HEC "hotspots" (Output 2).	6		X		X		X		X		X		
2.2 HEC reduction plans implemented at HEC "hotspots" (Output 2), following training under Activity 1.2.	34		X	X	X	X	X	X	X	X	X	X	X
3.1 Law enforcement patrols by PHKA and WCS-IP staff in key/priority sites (Output 3), following training under Activity 1.1.	30			X	X	X	X	X	X	X	X	X	X
3.2 Deployment of Wildlife Crimes Unit staff throughout Sumatra (Output 3), following training under Activity 1.1.	36	X	X	X	X	X	X	X	X	X	X	X	X
4.1 Workshops and 'on-the-job' training in CITES MIKE approved standard elephant population monitoring methods, HEC assessment and reduction methods, and law enforcement (including related to habitat loss) and law enforcement monitoring (LEM) provided for PHKA staff and newly hired WCS-IP project staff at national and provincial levels (Output 4).	34		X	X	X	X	X	X	X	X	X	X	
4.2 Public awareness and information dissemination activities in support of protected areas and elephant conservation.	30			X	X	X	X	X	X	X	X	X	X
4.3 Training in HEC reduction methods provided for villagers in HEC "hotspots" at participatory mini-workshops at the district and site levels (Output 4).	6		X		X		X		X		X		X
4.4 Indonesian student attends UK university (Output 4).	24					X	X	X	X	X	X	X	X
4.5 Training in HEC reduction methods provided for villagers in HEC "hotspots" at participatory mini-workshops at the district and site levels (Output 4).	6		X		X		X		X		X		X
4.6 Indonesian student attends UK university (Output 4).	24					X	X	X	X	X	X	X	X
4.7 Sumatran Elephant Management Plan written in collaboration with PHKA and other in-country partners.	6											X	X

**19. Please indicate which of the following Standard Measures you are likely to report against.** You will not necessarily plan to cover all these Standard Measures in your project.

Standard Measure No	Description	Tick if Relevant
1A	Number of people to submit thesis for PhD qualification (in host country)	
1B	Number of people to attain PhD qualification (in host country)	
2	Number of people to attain Masters qualification (MSc, MPhil etc)	✓
3	Number of people to attain other qualifications (ie. Not outputs 1 or 2 above)	
4A	Number of undergraduate students to receive training	✓
4B	Number of training weeks to be provided	✓
4C	Number of postgraduate students to receive training	
4D	Number of training weeks to be provided	
5	Number of people to receive at least one year of training (which does not fall into categories 1-4 above)	
6A	Number of people to receive other forms of education/training (which does not fall into categories 1-5 above)	✓
6B	Number of training weeks to be provided	✓
7	Number of (ie different types - not volume - of material produced) training materials to be produced for use by host country	✓
8	Number of weeks to be spent by UK project staff on project work in the host country	✓
9	Number of species/habitat management plans (or action plans) to be produced for Governments, public authorities, or other implementing agencies in the host country	✓
10	Number of individual field guides/manuals to be produced to assist work related to species identification, classification and recording	
11A	Number of papers to be published in peer reviewed journals	✓
11B	Number of papers to be submitted to peer reviewed journals	✓
12A	Number of computer based databases to be <b>established</b> and handed over to host country	✓
12B	Number of computer based databases to be <b>enhanced</b> and handed over to host country	
13A	Number of species reference collections to be <b>established</b> and handed over to host country(ies)	
13B	Number of species reference collections to be <b>enhanced</b> and handed over to host country(ies)	
14A	Number of conferences/seminars/ workshops to be <b>organised</b> to present/disseminate findings	✓
14B	Number of conferences/seminars/ workshops <b>attended</b> at which findings from Darwin project work will be presented/ disseminated.	✓
15A	Number of national press releases in host country(ies)	✓
15B	Number of local press releases in host country(ies)	✓
15C	Number of national press releases in UK	✓
15D	Number of local press releases in UK	
16A	Number of newsletters to be produced	
16B	Estimated circulation of each newsletter in the host country(ies)	
16C	Estimated circulation of each newsletter in the UK	
17A	Number of dissemination networks to be <b>established</b>	
17B	Number of dissemination networks to be <b>enhanced/ extended</b>	✓
18A	Number of national TV programmes/features in host country(ies)	
18B	Number of national TV programmes/features in UK	
18C	Number of local TV programmes/features in host country(ies)	
18D	Number of local TV programmes/features in UK	
19A	Number of national radio interviews/features in host county(ies)	✓
19B	Number of national radio interviews/features in UK	
19C	Number of local radio interviews/features in host country(ies)	✓
19D	Number of local radio interviews/features in UK	
20	Estimated value (£'s) of physical assets to be handed over to host country(ies)	✓
21	Number of permanent educational/training/research facilities or organisations to be established and then continued after Darwin funding has ceased	
22	Number of permanent field plots to be established during the project and continued after Darwin funding has ceased	
23	Value of resources raised from other sources (ie in addition to Darwin funding) for project work	✓

## PROJECT BASED MONITORING AND EVALUATION

**20. 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 and evaluation (M&E) plan will assess progress with the project's six components: institutional capacity-building and cooperation, community capacity-building, anti-poaching and reduction of habitat loss/degradation activities, elephant surveys and law enforcement monitoring, human–elephant conflict (HEC) assessment and mitigation, and long-term strategic planning. This will allow the project co-leaders, the host country project coordinator and project staff, as well as Darwin staff to assess progress more easily and allow us to adopt an adaptive management approach.

All monitoring will be done jointly by NEZS, WCS–IP, and PHKA staff. Specifically, the project's M&E plan will assess: (1) the extent to which villages actively participate in HEC mitigation efforts (training workshops and crop defence work) and their feedback on the work (to be assessed by attitude and opinion surveys); (2) the effectiveness of HEC mitigation measures (measured by directly assessing the elephants' responses and HEC rates (crop depredations, injuries and deaths caused by elephants, elephant capture rates, etc.), plus by use of questionnaire surveys to assess changes in attitudes to elephants in the communities); (3) the extent to which community members are able to use their training and pass on their knowledge to neighbouring villages (from semi-structured interviews); (4) the production and use of an elephant damage reduction self-help handbook (and feedback on its use); (5) the quality of the elephant population monitoring, the HEC incident extent/rate data, and the law enforcement data (including poaching rate and habitat degradation rate data) collected by the project's field teams (checked by the project's survey design/implementation experts through examination of survey reports, remote sensing imagery, etc.); (6) participation by PHKA staff in the monitoring method training workshops and in the actual fieldwork (assessed from workshop reports, questionnaires, semi-structured interviews, and field participation rates and performance); (7) the performance of the protected area staff and the Wildlife Crimes Unit in their anti-poaching and habitat loss reduction activities (assessed on information gathering rates, elephant poaching rates, habitat degradation rates; the authorities' responses; and prosecution rates); (8) multi-stakeholder participation in the production of, and support for, a Sumatran Elephant Management Plan.

We will also conduct annual all-staff review meetings in the host country in which we will review progress, feedback, logistic concerns, as well as re-assess plans for the following year. 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 and to plan what additional steps if any are necessary.

## FUNDING AND BUDGET

Please complete the separate Excel spreadsheet which will provide the Budget information for this application. Some of the questions below refer to the information in this spreadsheet.

**NB: Please state all costs by financial year (April to March). Use current prices – and include anticipated inflation, as appropriate up to 3% per annum. The Darwin Initiative will not be able to agree increases in grants to cover inflation on UK costs once grants are awarded.**

### 21. How is your organisation currently funded? (max 100 words)

The North of England Zoological Society is a registered charity (306077) that runs Chester Zoo. The Society receives no direct government funding to fulfil its charitable objectives. Approximately 82% of the Society's income is from the zoo's visitor-related activities such as visitor admissions. We receive around 16% of our funding from membership subscriptions and voluntary income sources, as pursued through various fundraising activities. The remaining 2% comes from investments.

**22. Provide details of all confirmed funding sources identified in the Budget that will be put towards the costs of the project, including any income from other public bodies, private sponsorship, donations, trusts, fees or trading activity. Please include any additional unconfirmed funding the project will attract to carry out additional work during or beyond the project lifetime. Indicate those funding sources which are confirmed.**

**Confirmed:**

£ 60,000 from North of England Zoological Society (Chester Zoo) – in kind  
£ 70,000 from Wildlife Conservation Society (WCS) – in kind

**Unconfirmed:**

£ 75,000 from US Fish & Wildlife Service Asian Elephant Conservation Fund  
£ 15,000 from the National Geographic Society

**23. Please give details of any further funding resources (confirmed or unconfirmed) sought from the host country partner (s) or others for this project that are not already detailed in the Budget or Question 22. This will include donations in kind or un-costed support eg accommodation. (max 50 words per box)**

**Financial resources:**

N/A.

**Funding in kind:**

Accommodation in national parks and other protected areas provided free of cost by PHKA.

**NEZS' most recent annual report and accounts are available at:**

<http://www.chesterzoo.org/Home/About/Annual%20Reports/2007.aspx>



**FCO NOTIFICATIONS**

Please check the box if you think that there are sensitivities that the Foreign and Commonwealth Office will need to be aware of should they want to publicise the project's success in the Darwin competition in the host country.

Please indicate whether you have contacted the local UK embassy or High Commission directly to discuss security issues (see Guidance Notes) and attach any advice you have received from them.

Yes (no written advice)

Yes, advice attached

No

**CERTIFICATION 2009/10**

On behalf of the trustees of

**North of England Zoological Society**

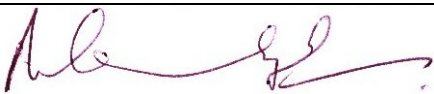
I apply for a grant of **£98,800** in respect of expenditure to be incurred in the financial year ending 31 March 2010 on the activities specified in the above application.

I certify that, to the best of our knowledge and belief, the statements made by us in this application are true and the information provided is correct. I am aware that this application form will form the basis of the project schedule should this application be successful. (This form should be signed by an individual authorised by the lead UK institution to submit applications and sign contracts on their behalf.)

**I enclose a copy of the organisation's most recent audited accounts and annual report, CVs for project principals and letters of support.**

<b>Name (block capitals)</b>	Alan Sykes
<b>Position in the organisation</b>	Company Secretary

Signed



Date:

1 Dec 2008

## Stage 2 Application - Checklist for submission

	Check
Have you provided actual start and end dates for your project?	✓
Have you provided your budget based on UK government financial years ie 1 April – 31 March?	✓
Have you checked that your budget is complete, correctly adds up and that you have included the correct final total on the top page of the application?	✓
Is the concept note within 1,000 words?	✓
Is the logframe no longer than 2 pages and have you highlighted any changes since Stage 1?	✓
Has your application been signed by a suitably authorised individual? (clear electronic or scanned signatures are acceptable)	✓
Have you included a 1 page CV for the Project Leader, any other UK staff working 50%+ on this project, and for a main individual in each overseas partner organisation?	✓
Have you included a letter of support from the main overseas partner organisations?	✓
Have you checked with the FCO in the project country/ies and have you included any evidence of this?	✓
Have you included a copy of your most recent annual report and accounts? An electronic link to a website is acceptable.	✓
Have you read the Guidance Notes ?	✓

Once you have answered Yes to the questions above, please submit the application, not later than midnight GMT on **Monday 1 December 2008** to [Darwin-Applications@ltsi.co.uk](mailto:Darwin-Applications@ltsi.co.uk) using the application number (from your Stage 1 feedback letter) and the first few words of the project title **as the subject of your email**. However, if you are e-mailing supporting documentation separately please include in the subject line an indication of the number of e-mails you are sending (eg whether the e-mail is 1 of 2, 2 of 3 etc). **In addition**, a hard copy of the application and any supporting documents not available electronically should be submitted to the Darwin Applications Management Unit, c/o ECTF, Pentlands Science Park, Bush Loan, Penicuik EH26 0PL **postmarked** not later than **Tuesday 2 December 2008**.

DATA PROTECTION ACT 1998: Applicants for grant funding must agree to any disclosure or exchange of information supplied on the application form (including the content of a declaration or undertaking) which the Department considers necessary for the administration, evaluation, monitoring and publicising of the Darwin Initiative. Application form data will also be held by contractors dealing with Darwin Initiative monitoring and evaluation. It is the responsibility of applicants to ensure that personal data can be supplied to the Department for the uses described in this paragraph. A completed application form will be taken as an agreement by the applicant and the grant/award recipient also to the following:- putting certain details (ie name, contact details and location of project work) on the Darwin Initiative and Defra websites (details relating to financial awards will not be put on the websites if requested in writing by the grant/award recipient); using personal data for the Darwin Initiative postal circulation list; and sending data to Foreign and Commonwealth Office posts outside the United Kingdom, including posts outside the European Economic Area. Confidential information relating to the project or its results and any personal data may be released on request, including under the Environmental Information Regulations, the code of Practice on Access to Government Information and the Freedom of Information Act 2000.