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DARWIN INITIATIVE

APPLICATION FOR GRANT FOR ROUND 11 COMPETITION: STAGE 2

Please read the Guidance Notes before completing this form. Give a full answer to each section; applications will be considered on the basis of information submitted on this form. Please do not cross-refer to information in separate documents except where invited on the form. The space provided indicates the level of detail required but you may provide additional information on a separate A4 sheet if necessary. Do not reduce the font size below 10pt or the paragraph spacing.

Submit by 13 January 2003

1. **Name and address of organisation**

Institute of Zoology (IoZ), the Zoological Society of London

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

Building capacity for conservation of a critically endangered flagship species

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

Details	Project leader	Other UK personnel (if working more than 50% of their time on project)	Main project partner or co-ordinator in host country
Surname	Amin		Mulama
Forename(s)	Rajan		Martin
Post held	Research Fellow		Kenya Rhino Coordinator
Institution (if different to above)	As above		Kenya Wildlife Service
Department	As above		Wildlife Department
Telephone			
Fax			
Email			

4. **Describe briefly the aims, activities and achievements of your organisation. (Large institutions please note that this should describe your unit or department)**

Aims

The mission of the Institute of Zoology is, *'To identify, undertake, and communicate high-quality biological research which benefits the conservation of animal species and their habitats'*. The Institute of Zoology is the research arm of the Zoological Society of London (registered charity number: 208728), which has a mission to *'To achieve and promote the worldwide conservation of animals and their habitats'*.

Activities

The Institute of Zoology is funded through the Higher Education Funding Council for England (HEFCE). The University of Cambridge is our academic partner and the activities of the Institute are managed through a joint committee from the University of Cambridge and the Zoological Society of London. Our activities are as follows: 1) Research on fundamental and applied aspects of whole organism biology, emphasizing topics in: Animal health & welfare, Reproductive biology, Genetic variation, Fitness and adaptability, Behavioural ecology, Population dynamics and community ecology, Wildlife epidemiology, Biodiversity and Macro-ecology; 2) Regular programme of research seminars, and training and technology transfer through MSc and PhD training programmes.

Achievements

The Institute of Zoology has become recognised as a leading international centre for conservation biology science and action. In the last two years significant achievements have included: 1) contributions to the understanding of processes that generate and maintain biodiversity, including the roles of speciation and population differentiation and the significance of genetic diversification for threatened population management; 2) methods for priority-setting for conservation in both area and species-based analyses; 3) contributions to understanding complex population dynamics and their implications for population management for conservation, including individual-based behavioural models, population viability analyses and analyses of population synchrony in taxa ranging from invertebrates to elephants; 4) elucidation of the role of infectious diseases in biodiversity conservation; and 5) novel techniques for non-invasive monitoring of fertility and inbreeding effects in threatened species. This work has been published in leading international journals (including *Nature, Proceedings of the Royal Society of London, Science, Proceeding of the National Academy of Science, Journal of Applied Ecology, Journal of Animal Ecology, Biological Conservation* and *Conservation Biology*).

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

Previous and existing funding: 1) Patterns of diversity in Ugandan forests (Dr A. Balmford, 1994); 2) Vicuna and guanaco conservation and genetic resource management (Dr H. Stanley, 1997); 3) Development of a research and monitoring unit at Garamba, D.R. Congo (Dr G. Cowlishaw, 2000); 4) Conservation of critically endangered *Gyps* species (Dr A. Cunningham, 2001); 5) A national plan for carnivore conservation in Tanzania (Dr S. Durrant, 2002); 6) Conserving the critically endangered Darwin's fox on Chiloe Island, Chile (Dr S. Funk, 2002).

6. Please list the overseas partners that will be involved in the project and explain their role and responsibilities in the project. The extent of their involvement at all stages in the project should be detailed, including in project development. Please provide written evidence of this partnership.

The key overseas partner is the Kenya Wildlife Service (KWS). KWS is a parastatal organisation under the Office of the President, responsible for the conservation and management of wildlife in Kenya. It is charged with the implementation of the Wildlife Policy (1975) and the Wildlife Act (revised in 1989). KWS's mission statement is *"To work with others to sustainably conserve, protect and manage Kenya's invaluable biodiversity for the benefit of the people and as a world heritage"*. The rhino conservation programme is one of KWS's Flagship biodiversity programmes and a key contributor to both KWS's vision and mission. This Darwin project's activities have been developed in conjunction with the Kenyan (KWS) rhino programme coordinator who heads the rhino programme (and his support scientist). They address key priorities that were identified in the revised Kenyan Black Rhino Strategy (2001). The main beneficiaries of this initiative will be KWS staff, and staff of private land sanctuaries conserving rhino on a custodianship basis for KWS (see attached letter of support from KWS). Two proposed Darwin Fellows involved in the development and planning of this project are members of IUCN Species Survival Commission's African Rhino Specialist Group (AfRSG). One is British and is the AfRSG's scientific officer. The two have worked with the Kenyan rhino programme on a number of occasions over the years, and have extensively collaborated with IoZ (R. Amin) in recent years on rhino matters. They will provide expertise on rhino monitoring techniques, analysis of monitoring data, population estimation, status reporting, habitat assessment and biological management. The two are also the compilers of the continentally recognised AfRSG training course in ID techniques for field rangers.

7. What steps have been taken to (a) engage at all appropriate levels within the host country partner organisations to ensure full support for the project and its outcomes; and (b) ensure the benefits of the project continue despite staff changes in these organisations?

(a)1: This proposal was developed in consultation with the Kenyan (KWS) rhino programme coordinator and aims to implement key priorities identified in the revised Kenyan Black Rhino Strategy, which was jointly developed at a major WWF-funded workshop by KWS and other stake-holders and partner NGOs, including the AfRSG and IoZ (R.Amin). (a)2: The project is also fully supported by the chair of the Association of Private Land Rhino Sanctuaries (see attached letter of support). (a)3: KWS partner NGOs (WWF, USAID, AWF etc.) have already committed significant monitoring equipment, computers and other operational material upon which this proposed Darwin Initiative is built (see attached letter of support). (a)4: Staff at a range of levels within KWS from rhino coordinator to field ranger will be involved in the project's proposed training and mentoring. (b)1: This project is specifically designed to ensure that its benefits will continue despite staff changes, by: (i) training skilled Kenyan instructors based in rhino reserves who in turn will train rhino monitoring field staff on an on-going basis; (ii) implementing the AfRSG's modular rhino monitoring training course for field rangers which allows new/transferred staff to enter/continue the training programme anywhere in the course, does not require additional funding, does not take staff away from station, and minimises time away from normal field duties; thus maximising the chance that training and rhino monitoring will continue into the future; (iii) training Kenyan scientists and rhino officers in using the decision support tools/procedures provided by the project; (iv) motivating staff to continue monitoring/status reporting, by assisting KWS to develop and implement a reporting process which engenders ownership by acknowledging all those involved, and provides feedback both upwards to managers and downwards to park staff; (v) institutionalising and standardising annual status reporting across Kenya, which will help ensure that new/transferred staff continue to provide the necessary information for the biological management of the critically endangered black rhino. (b)2: Many of the skills and conservation approaches taught/enhanced during this project could be applied to benefit the conservation of other species should staff be transferred out of rhino areas.

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

As the project has been developed through the relevant parastatal organisation under the Office of the President (KWS), further direct contact with the Government of Kenya is not required. The project will also work with private land black rhino sanctuaries via the appointed chair of the Association of Private Land Rhino Sanctuaries, who has been fully consulted. These sanctuaries hold and conserve some of Kenya's black rhino on a custodianship basis for KWS. The project will not directly concern local communities, except for the provision of rhino educational material to local schools. This will take place through KWS community liaison staff.

PROJECT DETAILS

9. Define the purpose (main objective) of the project in line with the logical framework.

This project's purpose is to develop a team of skilled Kenyan researchers and park field personnel capable of significantly contributing to the achievement of one of Kenya's key conservation goals: namely, increasing the numbers of the *Critically Endangered* eastern black rhino (*Diceros bicornis michaeli*), and conserving its natural habitat. It aims to develop human capacity and procedural mechanisms within the Kenyan Rhino Conservation Programme to 1) train personnel in field rhino monitoring, data collection, analysis and reporting; 2) produce standardised annual rhino status reports which assess the numbers, performance and population dynamics of Kenya's black rhino populations to aid biological management decision making; and 3) assess black rhino habitat conditions and carrying capacities in fenced rhino sanctuaries, allowing the management of habitats by adjusting rhino and other browser population densities.

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

It is a new initiative targeting a set of identified, outstanding priorities of an existing conservation programme.

11. How will the project assist the host country in its implementation of the Convention on Biological Diversity? Please make reference to the relevant article(s) of the CBD, thematic programmes and/or cross-cutting themes. Is any liaison proposed with the CBD national focal point in the host country? Further information about the CBD can be found on the Darwin website or CBD website.

The Articles under the Convention on Biological Diversity covered by this project include Articles 7 (identification and monitoring), 8 (in situ conservation) and 12 (research and training). This proposed project will build in-country Kenyan technical capacity to effectively and sustainably run the necessary rhino monitoring, habitat assessment, and biological management decision-making aspects of the Kenyan rhino conservation programme. In addition, this project will contribute to achieving key objectives of the 1998 Kenyan National Biodiversity Action Plan, namely: 1) developing the expertise within Kenya to promote the protection of natural habitats for the maintenance of viable populations (e.g. of black rhino) in their natural surroundings; 2) providing a scientific and technical education and training programme to facilitate the conservation and sustainable management of key components of Kenya's biodiversity (e.g. rhino and rhino habitat); and 3) establishing a range of field-based tools and infrastructure supporting Kenya's capacity for protected area management.

Further, because rhinos, elephants and other large browsers (e.g. giraffe) can significantly modify their habitat, their occurrence at high density can severely impact on the community structure and biodiversity of restricted areas. This is especially the case inside smaller ($<200km^2$) fenced sanctuaries within which most of Kenya's rhino are conserved. The improved rhino monitoring, habitat assessments and status reporting which will follow from this project will therefore benefit not only the management and conservation of rhinos but would also positively impact on the effective conservation of many other species.

12. How does the work meet a clearly identifiable biodiversity need or priority within the host country?

Kenya is the stronghold of the *Critically Endangered* eastern black rhino (*Diceros bicornis michaeli*) and currently conserves the majority (86.3%) of the remaining 500 of this subspecies. This project addresses conservation priorities listed in the revised Kenyan Black Rhino Strategy. This Strategy gives increased priority to improving monitoring and biological management to help achieve and maintain rapid meta-population growth. Specific training and capacity-building needs in rhino monitoring (from field data collection, data analysis to end-reporting) have been identified as urgently required. Procedures to assess and monitor black rhino habitat carrying capacity are needed to assist in the selection and development of new viable populations in Kenya, and to help manage existing fenced rhino sanctuaries. Already habitat changes in some sanctuaries due to high densities of rhino and competing browsers (e.g. Solio and Ngulia) have resulted in declines in rhino carrying capacities and population growth rates. By building technical capacity, improving access to resources and training, and strengthening research and monitoring capacity, this project will contribute to meeting key objectives of the 1998 Kenyan National Biodiversity Action Plan (as well as Articles 7, 8 and 12 of the CBD).

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

Not <u>directly</u> relevant, although the team fully recognise the conservation importance of sustainable initiatives which empower and benefit local communities. However, rhinos are part of Africa's charismatic megafauna which attracts tourists to Kenya, and as such, the revenue generated from wildlife tourism helps to fund the parastatal Kenya Wildlife Service, whilst also leading to the significant creation of jobs within the tourism industry. Rhinos are an important flagship species, and invariably if they are well managed and protected, many other species living with them will also benefit. Therefore the promotion of improved rhino conservation contributes to maintaining a healthy tourist industry with its attendant economic and social benefits.

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

This project will (provided important assumptions are met) significantly improve rhino monitoring and biological management decision-making, ultimately leading to increased numbers of black rhinos within their natural habitats. This will be achieved by: 1) providing a range of training which meets the specific needs of differing staff in the KWS rhino programme, from field rangers through to scientists, supported by written course material and reference work tailored to the KWS Rhino Strategy; 2) building staff capacity using tailor-made data-handling and decision support tools provided by the project (e.g. fully revised Rhino Information Management System, and RHINO population estimation software); 3) catalysing the production of written standardised annual rhino status reports, which will provide the detailed information (on the productivity, health and status of Kenya's black rhino populations and their habitats) needed to improve strategic biological decision-making; 4) developing a Kenyan black rhino carrying capacity model and monitoring system including manuals, which will provide an understanding of habitat features affecting black rhino densities in Kenya, improve the capacity of Kenyans to undertake future rhino habitat evaluations/carrying capacity assessments, and facilitate the development and appropriate stocking of existing and potential new rhino areas; 5) maximising the chance of outputs being disseminated and put into practice by following-up initial training with on-going mentoring.

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

A lasting legacy will be achieved by: 1) improving the human capacity within Kenya to conserve and increase Kenya's black rhino numbers; 2) the creation of a pool of rhino monitoring trainers in a number of parks (and mentoring them as they learn); 3) institutionalising a system of on-site on-going modular training in rhino monitoring by these trainers, which is likely to continue because it does not require staff to be away from station/duty for long periods, does not require additional funding for expensive courses at external training venues, and because it is modular and on-going is also ideally suited to handle staff turnover; 4) the provision of tailor-made data-handling and decision support tools (fully revised Rhino Information Management System and GIS, RHINO ver 2.0 population estimation software, carrying capacity model, manual/procedures and a system for habitat assessment) which will continue to be used after this project; 5) improving the quality and reliability of rhino monitoring data as a direct result of this project; 6) promoting the important process of standardised annual status reporting and use of these reports to assist biological decision making, by developing the in-country skills needed for this to continue once the project ends; 7) Assisting with making young Kenyans aware of the value of rhinos and of rhino conservation issues via an educational booklet for schools. Where adopted, these approaches have been proven to work in rhino conservation elsewhere in Africa, and are advocated as part of effective conservation of rhinos by the AfRSG. These approaches could also be adapted for application to other threatened species in future.

16. What steps have been taken to identify and address potential problems in achieving impact or legacy?

Three of the proposed Darwin Fellows have worked or liaised closely with the KWS Rhino Programme and other stakeholders over several years (WWF, AWF etc.), and are therefore in a good position to identify potential problem areas which could affect project impact and legacy. The *potential problems* and proposed steps/approaches to mitigate them are: *1) Lack of uptake of training:* Our proposed training will follow an outcomes-based approach and include formalised testing procedures to assess the degree of understanding/competence of trainees. Trainees will only be accredited if specific set standards of knowledge and competence are shown for each aspect of the training. (i.e. trainees will not simply be presented with certificates of attendance). Formal accreditation, and the pride and recognition it will bring, should act as motivator and promote uptake of training. 2) *Ranger/rhino officer staff turnover:* By training multiple rhino monitoring trainers and by using the AfRSG's on-going on-site modular teaching approach, rhino monitoring training should continue into the future despite staff turnover (see above). Furthermore, KWS is fully committed to retaining trained rhino staff within the rhino programme wherever possible (as detailed in the Kenyan Black Rhino Strategy), recognising that intensive monitoring, security and active biological management to ensure the rapid recovery of rhino populations requires well trained and highly motivated staff in the field. 3) *Potential lack of support for project activities by stakeholders:* i) Support for the proposed project's activities should be assured, as i) these were designed specifically to meet priority needs identified in the Kenyan Black Rhino Strategy. Project activities will also address some of the shortcomings revealed by a recent external review of KWS's rhino monitoring. ii) KWS's rhino programme has been fully involved in the development of this project, and the Association of Private Land Rhino Sanctuaries has also been consulted. iii) Project support should be enhanced as it builds upon technical infrastructure (monitoring and computer equipment and software) provided by NGOs (project leader played a major role in securing funding for this). iv) Finally, support for the project in the field should also come from the fact that several members of the project team have practical experience in working closely with Kenyan and other African rhino range state rhino programmes over several years, both at managerial and park ranger level. *(Continued on next page)*

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4) *Lack of proper implementation*: i) Staff need to know what is expected of them. The KWS rhino coordinator will therefore draw up Terms of Reference (ToR) for each relevant rhino staff member involved in the project which should provide clear guidance on their responsibilities. The ToR will be established at the start of the project and updated as necessary (please see attached letter). ii) Focus areas of the proposed project such as rhino or habitat monitoring will have required reporting and evaluation procedures associated with them (monthly field reports, six monthly field assessments, annual status reports, habitat evaluation reports). iii) During the project lifetime, Darwin Fellows and the rhino programme coordinator will be able to use these to identify problems with implementation at an early stage and take necessary remedial action/training. iv) A lack of confidence and a fear of making mistakes may be a factor that may preclude full implementation. The process of accreditation and mentoring, support and encouragement by Darwin Fellows should help provide staff with the necessary confidence to implement what they have learned. v) After this Darwin Initiative has ended, the rhino programme coordinator and the National Rhino Management and Technical committees will be able to monitor the levels of implementation of on-going rhino programme activities introduced/enhanced by the project. 5) *Relevance of academic research projects and choice of appropriate students*: The Kenyan rhino coordinator has identified two highly motivated and well-established rhino officers for the 2 potential MSc's, which will enable capacity to be built at a critical managerial level in the rhino programme. Darwin Fellows and the rhino coordinator will develop appropriate research programmes for the MSc's to ensure the students continue to make a significant contribution well beyond the study.

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

The work is innovative in that it will 1) result in the development of a first Kenyan rhino carrying capacity model; 2) not only train trainers and staff, but back up and reinforce the training process with follow-up mentoring and support; 3) will develop formal accreditation tests and procedures for the AfRSG rhino monitoring course and other training. The work is distinctive as it should result in an integrated and significantly enhanced rhino monitoring and reporting system being institutionalised within Kenya's rhino programme which will boost the biological management capacity within Kenya.

The Darwin Initiative will be fully acknowledged in all reports and scientific papers, and the logo will be displayed on the cover of all reports (status reports, habitat assessment reports). The logo will also be displayed on 1) course notes, presentations, and accreditation tests developed by the project; 2) formal presentations e.g. 2004, 2006 SSC IUCN AfRSG meetings; UK Rhino Mayday Symposium, Zoological Society of London (ZSL) Scientific meetings; 3) Rhino Information Management System and habitat assessment databases; 4) the user manual for the Kenyan rhino carrying capacity model and the procedural manual for habitat assessment; and 5) the rhino education booklet for schools. Darwin certificates will be presented to all staff who successfully complete and are accredited in the various training elements. The ZSL press office is regularly involved in publicising projects in which their employees play a role, and radio and newspaper articles are envisaged where the contribution of the Darwin Initiative will be fully acknowledged and publicised. Where appropriate coverage and publicity will be given to the Darwin Initiative within the host country. The project will also be publicised on both the ZSL and KWS websites.

18. Are you aware of any other individuals/organisations carrying out similar work? Are there completed or existing Darwin Initiative projects which are relevant to your work? Please give details, explaining the similarities and differences. Show how the outputs and outcomes of this work will be additional to any similar work, and what attempts have been/will be made to co-operate with such work for mutual benefits.

- The project team has consulted with the KWS rhino programme coordinator to ensure that partner NGOs contributing to the rhino programme such as WWF and AWF (see attached letter of support) had no current plans to fund activities which will duplicate work proposed in this project.
- While a carrying capacity model has been built for South African and Namibian areas by one of the proposed Darwin Fellows, this is not directly applicable to Kenya with its richer soils, dual rainy season and lack of frost. A specific model therefore needs to be developed for Kenyan conditions. However this project will build upon earlier work (and therefore reduce development costs).
- The team is aware of four current/past Darwin projects dealing with different aspects of conservation in rhino areas but all have different focuses such as law enforcement monitoring, community conservation, and studying potential negative impacts of disturbance by tourists.
  - ➢ An IoZ-based Darwin project (project leader: Dr Guy Cowlishaw - 01/01/01 – 31/12/02, project reference: 162/09/020) aims to train park guards in the collection of data that can be used to enhance the protection of Garamaba National Park (which holds northern white rhino) and other National Parks in DR Congo. This project has been discussed with Dr Cowlishaw, who confirms that it has a distinctly different emphasis, concentrating on law enforcement monitoring and the collection of anti-poaching data. In contrast, our proposal is concerned with the biological management and monitoring of 11 black rhino populations (a different rhino species).
  - ➢ A current Darwin project based at the Durrell Institute for Conservation Ecology, DICE (01/05/01 – 31/10/03, project reference: 162/10/003 - project leader: Prof. Nigel Leader Williams) focuses on community-based conservation and tourism in the Masai Mara in Kenya. This project aims to develop and implement a community-driven conservation, conflict resolution and ecotourism programme through local training and establishing a centre for ecotourism and wildlife monitoring. The local training is in tourism management and wildlife conflict monitoring and is primarily focussed on the Olderkessi/Naikarra community areas in the Masai Mara. Very few rhinos occur in this area.

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➤ There was a past DI project in the Masai Mara in Kenya (01/06/97-31/09/01, project reference: 162/06/131, project leader: Dr M. Walpole based at DICE). The research element of this project included investigating factors influencing the recovery of the local black rhino population, and expansion of the monitoring systems, and therefore has some overlap with this proposal. However the national metapopulation perspective, institutionalising of training (training of trainers and mentoring of research/rhino programme staff, status reporting, development of a Kenyan ecological carrying capacity model and habitat assessment procedures, and implementation of supporting field tools (databases, habitat assessment procedural manual, RHINO software) proposed here gives our project a distinctly different emphasis.

➤ The Darwin Project with the most similarity is Black rhino conservation and ecotourism impacts in North Western Namibia (01/04/02 – 31/03/05, project reference: 162/11/005, project leader: Prof. N. Leader-Williams). The purpose of this project is to develop a Namibian Ministry of Environment and Tourism (MET) and community-driven programme that contributes to improving livelihoods and conservation in the region in order to secure the protection of mega-fauna and optimise black rhino growth rates in line with metapopulation goals of the national population of black rhino. This project differs from our proposal in that a) it is concerned with a different black rhino subspecies in a completely different region of Africa, and b) it focuses on understanding potential impacts of tourism disturbances on the desert rhinos, and on increasing the capacity to make improved decisions regarding development of tourism and management of black rhino in a very extensive, unfenced area. A similarity to our proposed project is that it also seeks to develop a sustainable monitoring programme for the black rhino and to have it co-ordinated and run by local staff. However, operational conditions, staffing/organisational structures etc. are very different between Kenya and NW Namibia, and each needs their own specific systems. Status reporting and use of the AfRSG rhino monitoring training programme (both major needs in our Kenyan project) already take place in Namibia. The accreditation tests to be developed by our project will be made available to Namibia and all other rhino range states. Another similarity of the NW Namibia project is that of undertaking a habitat suitability study. North Western Namibia has completely different vegetation and climate to Kenya, and the rhinos occur there at very low densities in comparison. Different models are therefore required for the two areas.

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

Training and skills development are a major component of this project. All trainees will be Kenyan-based: either KWS rhino programme scientific staff or rhino officers/field staff working in both KWS and private-land rhino areas rhino. The criteria for selection in all cases will be whether or not individuals will be in a position to routinely apply the skills learned. The proposed training is as follows: 1) 20 rhino officers are to be trained to become trainers in rhino monitoring techniques using the continentally recognised AfRSG course (5 day trainer's course and on-site training and support as needed); 2) The same 20 officers to be trained in rhino monitoring data entry and management, data quality control, basic processing & reporting using the Kenyan Rhino Information Management System and GIS, and Microsoft Word and Excel (5 day course and follow-up on-site training as needed); 3) 165 field rangers responsible for rhino monitoring in the field are to be trained in rhino monitoring by new local instructors, with mentoring and additional advisory support given to trainers by Darwin Fellows (intensive 10 week on-site training followed by regular training by local instructors with support from Darwin Fellows where necessary); 4) 11 rhino officers/ researchers from parks will be trained to produce basic annual park reports for KWS headquarter staff to use in national status reporting (2 weeks in the first year with additional support and training in 2nd year, and mentoring in 3rd year); 5) 1 Kenyan rhino programme coordinator and 1 (KWS) rhino scientist are to be trained in the synthesis and interpretation of annual park and national rhino status reports (2 weeks in the first year with additional support and training in 2 subsequent years); 6) 2 Kenyan scientists will be trained in the use of RHINO Bayesian mark recapture population estimation software (5 days); 7) 5 research staff will be mentored during the development of the Kenyan black rhino ecological carrying capacity model (during field work and data analysis), and trained in procedures for rhino habitat assessments (5 day course and extensive on-site training); 8) 2 MSc studentships and 4 BSc projects will be completed at Moi University; and 9) 1000 rhino conservation education booklets will go to schools around rhino areas; 10) KWS and other East African diploma and certificate students in wildlife management at the KWS Training Institute, Naivasha, are to be given a 5 day course in metapopulation management annually.

Measurement of the outcomes of training (where applicable) will be done via 1) the use of in-built, outcomes-based skills accreditation tests within training courses; 2) field visits by Darwin Fellow(s) to evaluate progress; 3) quality checks on monthly monitoring reports submitted by field staff; and 4) supervisory or advisory input into field monitoring, rhino monitoring data analysis, status reporting, and habitat research and monitoring activities programmed in 2 subsequent years. The ultimate success of this training will be indicated by the degree of improvement in monitoring, the production of national status reports, and the assessment of habitats and carrying capacities. The accreditation procedures to be developed for the AfRSG rhino monitoring training course as part of this project will have wider applicability throughout African rhino range states using the course. For details of approximate course dates see section 21 – actual dates will depend on staff and venue availability.

20. How are the benefits and/or work of the project expected to continue after the end of grant period? Please provide a clear exit strategy.

By training, mentoring and accrediting multiple trainers to teach rhino monitoring techniques using the AfRSG modular course, future training can be done by local Kenyan staff on an on-going basis back on their own reserves without the need to take staff off duty or station, and will not be dependent upon the need for significant additional future outside input and funding. The Darwin project will thus institutionalise an appropriate training approach that encourages its on-going implementation. The process of testing and accrediting both trainers and trainees will help institutionalise the process and provide recognition to those accredited, making it more likely training will continue into the future. By providing active skills development, support and mentoring, the project will build confidence in rhino programme staff to run the rhino and habitat monitoring, training and status reporting activities after project completion. In the Southern African Rhino Management Group region the introduction of regular rhino status reporting has had a catalytic impact on rhino conservation, and has helped to stimulate and encourage those undertaking reporting at a reserve level. Similarly, this should provide added motivation to the Kenyan rhino programme. The project will also leave behind a number of support tools such as the enhanced Kenyan Rhino Information Management System and GIS, RHINO 2.0 software, habitat assessment procedural manual, and a carrying capacity estimation model. Local staff will have been trained and mentored in their use and should have the ability and confidence to continue to use these tools after the project formally ends. Three of the proposed Darwin Fellows (R Amin, K Adcock & R Emslie) have long-term commitments to African rhino conservation, and therefore formal and informal contact with KWS will be maintained beyond the lifetime of this Darwin Initiative project. Further, should rhino programme staff have any queries or problems once the project has officially ended, the Darwin Fellows on the project team will provide any feasible assistance via e-mail or over the telephone.

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

Project implementation timetable

Date	Key milestones (timings of courses may change slightly due to availability of suitable venues and staff)
03/04 – 03/09	**Reporting Period 1**
03/06 *April 2003 –*	Formal theoretical examinations and practical tests for accreditation of rhino monitoring instructors/trainers and field rangers produced.
03/06 *Sept 2003*	5-day course in meta-population species management completed (KWS diploma/certificate in wildlife management).
03/07	Workshop completed: Training of 20 rhino officers as instructors to train field rangers on a regular basis.
03/07	Compilation of available environmental information in 11 rhino areas for development of black rhino Ecological Carrying Capacity (ECC) model completed.
03/08	Workshop completed: Training of 20 rhino officers in field data quality control, entry, processing and reporting based on Kenyan Rhino Information Management System and standard software packages (Microsoft Word, Excel – basic use of these with standard KWS reporting templates).
03/08	Development of Rhino Information Management System with user manuals and interactive tutorials completed.
03/08	2 Kenyan rhino officers start their 2-year MSc in Wildlife Management, Moi University.
03/10 – 04/03	**Reporting Period 2**
03/10 *Oct 2003 – Nov 2004*	Intensive on-site training of 165 field rangers in rhino monitoring techniques (by newly trained local instructors with support from Darwin Fellows) completed.
03/10	Implementation of fully operational Rhino Information Management System with GIS in 11 rhino parks and KWS headquarters completed. KWS rhino scientist trained in its maintenance and future development.
04/01	Publication and distribution of 1000 rhino conservation education booklets to local schools completed.
04/03	ECC fieldwork and initial development of the Kenyan black rhino ecological carrying capacity model completed, preliminary estimates for 11 parks produced.
04/04 – 04/09	**Reporting Period 3**
04/04 *April 2004 –*	Rhino annual national and park status reporting templates (tailor made for Kenyan needs) developed.
04/04 *Sept 2004*	Training of 2 KWS rhino scientists in producing population estimates using RHINO Bayesian Mark Recapture software completed.
04/04	Training of rhino coordinator, rhino scientist and 11 rhino officers/park researchers in detailed population data analysis and preparation of annual status reports completed.
04/04	First annual park status reports produced by rhino officers/park researchers with supervision from Darwin Fellows.

04/04	First annual national status report produced by rhino coordinator and rhino scientist with supervision from Darwin Fellows.
04/05	Rhino coordinator to arrange a sitting of the Kenyan Rhino Management and Rhino Technical Committees (RMC, RTC) to review the first annual status reports.
04/05	Procedural manual and template park databases for rhino habitat assessments produced.
04/06	5-day course in meta-population species management completed (KWS diploma/certificate in Wildlife Management).
04/06	2 undergraduate student placement projects started.
04/06	Field assessment report submitted to the Kenyan RMC & RTC following 6 monthly assessment of training, data quality, entry and reporting procedures, and any on-site training by rhino scientist and Darwin Fellow(s).
04/07	Workshop completed: Training of at least 5 park scientists/researchers in habitat assessment.
04/07	Additional field habitat assessment in new & existing rhino areas completed.
04/08	Habitat assessment reports for new and existing 11 sanctuaries/parks produced.
04/08	Project reports by 2 undergraduate placement students produced.
04/08	2 MSc field projects started.
04/10 – 05/03 04/12 *Oct 2004 -* *Mar 2005*	**Reporting Period 4** Carrying capacity model finalised. 2 papers based on the habitat assessment and ECC work submitted to peer-reviewed scientific journals.
04/12	Field assessment report submitted to the Kenyan RMC & RTC following 6 monthly assessment of training, data quality, entry and reporting procedures, and any on-site training by rhino scientist and Darwin Fellow(s).
05/04 – 05/09 05/04 *April 2005 -* *Sept 2005*	**Reporting Period 5** Second annual park and national status reports produced by rhino officers/park researchers, and rhino coordinator and rhino scientist with supervision from Darwin Fellows.
05/04	Rhino coordinator to arrange a sitting of the Kenyan RMC & RTC to review the second annual status reports.
05/06	2 undergraduate student placement projects started.
05/06	Field assessment report submitted to the Kenyan RMC & RTC following 6 monthly assessment of training, data quality, entry and reporting procedures, and any on-site training by rhino scientist and Darwin Fellow(s).
05/06	5-day course in meta-population species management completed (KWS diploma/certificate in wildlife management).
05/08	Project reports by 2 undergraduate placement students produced.
05/08	2 MSc project theses submitted.
05/10 – 06/03 05/12 *Oct 2005 -* 05/12 *Mar 2006*	**Reporting Period 6 (Advisory Role)** 2 papers based on MSc field projects submitted for publication in peer-reviewed scientific journals. Field assessment report produced by KWS and submitted to the Kenyan RMC & RTC following 6 monthly assessment of training, data quality, entry and reporting procedures, and any on-site training by rhino scientist.
06/03	Third annual park and national status reports produced by rhino officers/park researchers and rhino scientist with minimal supervision from Darwin Fellows.
06/03	Rhino coordinator to arrange a sitting of the Kenyan RMC & RTC to review the third annual status reports and to work towards the production of the next 5-year plan.

22. How will the most significant outputs contribute towards achieving the purpose of the project? (This should be summarised in the Log Frame as Indicators at Purpose level)

The training and accreditation of trainers in rhino monitoring, and in turn the institutionalisation of training and accreditation of field rangers in the rhino parks should provide the required improved rhino monitoring data. The guidance and mentoring given to KWS staff producing the first three status reports should provide improved comparative information on rhino population sizes, performance and dynamics to help inform and improve biological decision-making and hence contribute to the main purpose of the project (assisting in achieving the target black rhino population growth rates and sizes called for in the revised rhino Strategy, and meeting CBD and Kenyan Biodiversity objectives). The development of procedures and skills in Kenyan rhino habitat carrying capacity estimation and habitat assessment will also facilitate improved rhino and browser stocking rate management decision-making and habitat management, which should increase rhino numbers as a result. The decision support tools (Kenyan Rhino Information Management System, RHINO population estimation tool, habitat assessment system) running at park and headquarter level will also facilitate improved monitoring and biological management of rhinos and their habitat.

23. Set out the project's measurable outputs using the attached list of output measures

PROJECT OUTPUTS

Year/Month (starting April)	Standard Output Number (see standard output list)	Description (include numbers of people involved, publications produced, Days/weeks etc)
03/04 – 03/09		**Reporting Period 1**
03/05	1 x (7)	Detailed course notes: meta-population species management (KWS diploma/certificate in Wildlife Management).
03/06	~20 x (6A) 1 x (6B)	5-day course in meta-population species management (KWS diploma/certificate in Wildlife Management).
03/06	2 x (7)	Formal theoretical examinations and practical tests for accreditation of rhino monitoring instructors/trainers and field rangers (2 weeks).
03/07	20 x (6A) 1 x (6B)	20 trained instructors (rhino officers) in rhino monitoring (5-day training workshop + regular on-site training and support as required).
03/08	1 x (7)	Training guidance notes: training of field officers in data quality control, basic data processing and reporting using the Rhino Information Management System and standard software packages (Microsoft Word, Excel) (2 weeks).
03/08	20 x (6A) 1 x (6B)	20 trained staff undertaking rhino monitoring, data quality control, basic data processing & reporting using the Rhino Information Management System and standard software packages (Microsoft Word, Excel) (5-day training workshop + on-site training and support).
03/10 – 04/03		**Reporting Period 2**
03/10	165 x (6A), 10 x (6B)	165 trained rangers in rhino monitoring (intensive on-site training by local instructors with support and monitoring from Darwin Fellows) (10 weeks).
03/10	1 x (12B) 1 x (7B)	Fully operational Rhino Information Management System + GIS with user manual and tutorials in 11 rhino parks and KWS headquarters (14 weeks). (7B= user manual)
04/01	1000 x (7C)	1000 rhino conservation education booklets published and distributed to local schools (4 weeks). (7C= educational material for schools)
04/03	1 x (12C), 1 x (7B)	Initial black rhino ecological carrying capacity model for Kenya with preliminary estimates for 11 rhino parks (8 weeks). (*12C= computer-based programme (model), 7B = associated user manual*)
04/04 – 04/09		**Reporting Period 3**
04/04	2 x (6A), 1 x (6B) 1 x (12C), 1 x (7B)	2 KWS rhino scientists trained in producing population estimates using RHINO Bayesian Mark Recapture software (5-days). (*12C= computer-based programme, 7B = associated user manual*)
04/04	13 x (6A) 2 x (6B)	1 KWS rhino programme coordinator, 1 KWS rhino scientist and 11 rhino officers/researchers trained in detailed population data analysis, production and interpretation of annual park and national rhino status reports (2 weeks).
04/04	12 x (9)	Standardised annual rhino status reports at park and national levels (2 weeks).
04/05	1 x (10), 11 x (12A)	Procedural manual and template park databases for habitat assessments (4 weeks).
04/06	~20 x (6A), 1 x (6B)	5-day course in meta-population species management (KWS diploma/certificate in Wildlife Management).
04/07	5 x (6A), 1 x (6B)	At least 5 trained staff in rhino habitat assessment (5-day workshop + field training).
04/08	11 x (9)	Habitat assessment reports for new and existing 11 sanctuaries/parks (6 weeks).
04/08	2 x (4A) 12 x (4B)	2 Kenyan undergraduate placements trained in conservation research, wildlife monitoring and management (12 weeks).
04/10 – 05/03		**Reporting Period 4**
04/12	2 x (11B)	Finalised carrying capacity model and revised park estimates (see above). 2 papers based on habitat assessment and ecological carrying capacity work submitted for publication in peer-reviewed journals.

05/04 – 05/09		**Reporting Period 5**
05/04	12 x (9)	Standardised annual rhino status reports at park and national levels (4 weeks).
05/06	~20 x (6A), 1 x (6B)	5-day course in meta-population species management (KWS diploma/certificate in Wildlife Management).
05/08	2 x (4A), 12 x (4B)	2 Kenyan undergraduate placements trained in conservation research, wildlife monitoring and management (12 weeks).
05/08	2 x (2)	2 MSc students (Kenyan park officers) trained in conservation research, wildlife monitoring and management (2 years).
05/12	2 x (11B)	2 papers submitted for publication in peer-reviewed journals.
05/10 – 06/03		**Reporting Period 6**
06/03	11 x (9)	Standardised annual rhino status reports at park and national levels (4 weeks).
Additional Outputs:	12 x (8), 5 x (15AC), 1 x (18A), 2 x (19ACD), 110 x (22), £9120 x (20) £325207x (23)	(22) = +-10 GPS located 3-8 km habitat monitoring transects in each of 11 rhino areas. Items in (20): AfRSG training material = £2160, RHINO 2.0 population estimation software = £1160, rhino habitat carrying capacity model software = £800, Rhino Information Management System + GIS = £5000.

MONITORING AND EVALUATION

24. Describe how the progress of the project, including towards delivery of outputs, will be monitored and evaluated in terms of achieving its overall purpose. This should be both during the lifetime of the project and at its conclusion. Please make reference to the indicators described in the Logistical Framework.

During the lifetime of the project, progress will be monitored in terms of: 1) whether the training course for future trainers in rhino ID monitoring has been held; 2) whether accreditation tests have been developed for a) trained instructors of the AfRSG rhino monitoring course, and b) field ranger trainees; 3) the number of trainers and trainees who both take and pass these accreditation tests, and the number of AfRSG rhino monitoring training course sets that have been distributed; 4) the quality of field rhino monitoring data produced, assessed through repeat on-site visits by Darwin Fellows and evaluation of reports/data submitted by the field officers to the rhino programme at KWS headquarters; 5) whether the fully revised Kenyan Rhino Information Management system (database) and GIS has been completed, how many copies have been provided and installed, whether the training course in its use has been held, and the number of officers trained; 6) whether the rhino programme coordinator, and rhino scientist have been trained in detailed field data analysis, interpretation of rhino population dynamics and effective status reporting for decision-making; 7) the number and quality of national status report summaries produced by the KWS rhino programme; 8) the increase in national status report quality over time; 9) the number of rhino officers / researchers from parks trained to produce basic annual park status reports and the number and quality of annual park reports/data submitted to KWS headquarters staff; 10) whether a Kenyan black rhino ecological carrying capacity model, and associated habitat monitoring system and procedural manual have been produced, whether training has been given in their use, and the number thus trained; 11) whether 2 rhino scientists have been trained in the use of RHINO 2.0 Bayesian Mark Recapture Population Estimation tool; 12) the number of copies of RHINO software provided; 13) whether RHINO has been used to improve rhino population estimates in parks with unidentifiable rhino; 14) whether 2 MSc and 4 BSc projects have been completed at Moi University; 15) the number of lectures/courses given by Darwin Fellows in Kenya; 16) the number of copies of the rhino conservation education booklet produced and distributed; 17) details of reports/papers produced and of publicity given to the Darwin Initiative; finally 18) whether publicity photographs of the project and its activities have been submitted to the Darwin Initiative.

The overall assessment of progress at the end of the project will be: 1) the degree to which local Kenyan capacity to undertake rhino monitoring, and collect, store, quality control, analyse and write up these data has improved; 2) whether information on rhino population sizes and dynamics, habitat conditions and estimated park carrying capacities has improved and whether this has helped the Kenyan rhino programme and the Rhino Management and Technical Committees make recommendations for rhino metapopulation management for population growth and for habitat management/conservation. In time, the success of the project will be measured by the quality and amount of in-country training, monitoring, habitat assessment and status reporting that takes place once the project has finished, and by the rate of increase in black rhino numbers.

25. How will host country partners be involved in monitoring and evaluation of the project?

KWS rhino programme staff will be able to monitor the success of the project by tracking the number of trainers accredited, and the number of rhino monitoring field rangers trained and accredited in ID-based rhino monitoring techniques. KWS's rhino programme staff at headquarters will be analysing the monitoring data and park reports produced, which will enable them to assess improvements in the quality and quantity of captured rhino monitoring data and its analysis and interpretation which follow from project activities. KWS headquarter rhino programme staff will also be involved in the 6 monthly field assessments. KWS rhino programme staff and the Kenyan Rhino Management and Technical Committees can also confirm whether the information needed to guide biological decision-making has improved (e.g. population estimates, comparative measures of rhino population performance, and habitat status and potential carrying capacities in each area).

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26. How will you ensure that the project achieves value for money?

In addition to obtaining matching funds, Darwin Fellows will wherever possible 1) use tried and tested approaches with a high chance of success (eg use RHINO and AfRSG rhino monitoring training course); 2) train trainers in field rhino monitoring and seek to institutionalise on-going modular training and status reporting so that the training and hence value can continue after the end of the project; 3) maximise the likelihood of training continuing into the future after the project has ended as the on-site modular course ensures that staff will not be required to be away from station or away from duty for long periods, and no additional funding will be needed to cover the costs of future courses being given by those trained; 4) mentoring of those being trained will seek to build both skills and confidence, and so maximise the chance that skills learned will be put into practice; 5) book air-tickets in advance to maximise the chance of getting discounted economy air fares; and will "multi-task" on trips to Kenya as much as possible, to keep the number of flights to a minimum.

This project has been carefully costed, with significant contributions from IoZ, KWS, and other bodies. IoZ has an active financial project management scheme in place to satisfy HEFCE funding requirements that will provide monthly tracking of project expenditure. Added value to this project is provided by the direct involvement of specialist members of the IUCN African Rhino Specialist Group and the close involvement of the project leader with KWS over the last ten years, allowing collaboration and synergy of project objectives with wider issues.

27. Reporting Requirements. All projects must submit six monthly reports (by 31 October each year) and annual reports (by 30 April each year). Please check the box for all reports that you will be submitting, dependent on the term of your project. You must ensure that you cover the full term of your project.

Report type	Period covered	Due date	REQUIRED?
Six month report	1 April 2003 – 30 September 2003	30 October 2003	Yes
Annual report	1 April 2003 – 31 March 2004	30 April 2004	Yes
Six month report	1 April 2004 – 30 September 2004	30 October 2004	Yes
Annual	1 April 2004 – 31 March 2005	30 April 2005	Yes
Six month report	1 April 2005 – 30 September 2005	30 October 2005	Yes
Annual report	1 April 2005 – 31 March 2006	30 April 2006	Yes
Six month report	1 April 2006 – 30 September 2006	30 October 2006	No
Final report	1 April 2004 – project end date	3 months after project completion	Yes

LOGICAL FRAMEWORK

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

Project summary	Measurable indicators	Means of verification	Important assumptions
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 • the conservation of biological diversity, • the sustainable use of its components, and • the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources			
Purpose			
To build local capacity to ensure that Kenya Wildlife Service has the human resources and information systems necessary to 1) achieve the targets for black rhino conservation mandated in it's Kenya 5-year Black Rhino Strategy; and 2) meet CBD objectives.	Improved information on rhino population sizes and dynamics, and *rhino* habitat carrying capacities *and conditions*, to be used for effective management and implementation of the Kenyan 5 year Black Rhino Strategy.	Annual national and park rhino status reports, providing indicators of population performances, and recommedations for rhino meta-population and habitat management across 11 Kenyan parks. Regular reviews & feedback reports from Kenyan Rhino Management and Technical Committees (RMC & RTC) and the IUCN AfRSG.	High level support within the Kenya Wildlife Service for the aims of the Kenya rhino management strategy. *Adequate KWS funds and staffing to protect and manage rhino areas.* Continuing successful grants to implement annually reviewed conservation strategies.
Outputs			
a) A comprehensive, quality controlled system for monitoring of black rhino and their habitats in Kenya.	Consensus among stakeholders (including KWS and international conservation NGOs) on the utility of the approach.	Reports on meetings with stakeholders, annual reports, and project final report.	Retention of staff with specialised training skills and experience, and high staff motivation.
b) A body of trained and accredited instructors for the AfRSG rhino monitoring course who are capable of continuing in-country training of field rangers.	Minimum of 20 rhino officers from 11 parks trained *and tested. Those that pass accredited.*	Numbers of staff trained and levels of achievement attained summarised in training assessment reports.	A high % of participants pass assessments and continue present positions.
c) A body of trained and accredited rhino monitoring field rangers.	Minimum of 165 field rangers from 11 parks trained and *tested. Those that pass accredited*	Monthly field monitoring reports; 6 monthly assessment reports summarising number of staff trained & accredited and levels of achievement attained.	Highly trained and motivated instructors. Well motivated field rangers. High levels of staff retention.
d) Rhino officers trained in rhino monitoring data quality control, entry, basic processing & reporting.	Minimum of 20 rhino officers from 11 parks trained *and tested. Those that pass accredited*	Monthly reports; 6 monthly on-site assessments.	Highly motivated staff and high levels of retention.
e) *[i]* Rhino programme coordinator, *and* scientist, trained in detailed field data analysis, interpretation of population dynamics and effective status reporting for decision-making.	*Rhino programme coordinator and support scientist from KWS headquarters trained.*	Numbers of staff trained. Quality of annual status reports.	Well-motivated staff and high levels of staff retention.

e) [ii] Rhino officers / researchers from parks trained to produce basic annual park reports for KWS headquarter staff to use in national status reporting	At least 11 rhino officer/researchers trained (1 from each population)	Numbers of staff trained. Quality of annual park reports/data submitted to KWS headquarters staff.	Well-motivated staff and high levels of staff retention.
f) Three sets of park and national annual status reports.	Reports published and reviewed by the RMC & RTC.	Management actions. Reviews and feedback reports from the RMC & RTC.	Sufficient quality data from the field.
g) Fully revised Rhino Information Management System + GIS, user manual, tutorials & training (see d).	Fully working system in 11 parks.	Rhino monitoring data in system database, monthly park reports.	High level of support for equipment maintenance and repairs.
h) A black rhino ecological carrying capacity model with procedures and training for habitat assessments, habitat monitoring and updating the model.	Data established on various variables / determinants of rhino ecological carrying capacities for each park, model developed, carrying capacities estimated, monitoring system established.	Improved ecological carrying capacity estimates for each park. Number of park researchers/ecologists trained. Habitat monitoring reports and procedural manual.	Past & current environmental data available (e.g. average monthly rainfall, soils/geology). Highly motivated staff.
i) Rhino scientists trained in the use of Rhino 2.0 Bayesian Mark Recapture Population Estimation tool.	RHINO population estimation tool used in parks with unidentifiable rhino. At least two scientists trained.	Improved rhino population estimates for such parks.	Correct monitoring of recognisable & unrecognisable rhino, highly motivated staff continues in present position.
j) 2 MSc studentships and 4 BSc projects completed	Students enrolled at Moi university, examination and projects reports.	BSc, MSc reports and certificates.	MSc's passed by University. BSc students available to undertake field projects.
k) Publications and publicity.	Rhino conservation education booklet (1000 copies distributed to schools), 4 peer-reviewed papers, 2 radio broadcasts.	2 copies of all publications sent to Darwin Initiative	Outlets for publications and publicity willing to participate.

Activities	Activity Milestones (Summary of Project Implementation Timetable)
TRAINING	Yr 1: Preparation of material for AfRSG rhino monitoring training for instructors course (4 wks Jun); Yr 1: Workshop to train rhino officers as instructors to train field rangers on a regular basis (1 wk Jul); Yr 1: Preparation of material for AfRSG rhino monitoring training for park rangers course (2 wks Jul); Yr 1: Preparation of material for field data management, processing and reporting workshop (2 wks Jul); Yr 1: Workshop to train rhino officers in field data quality control, entry, processing and reporting based on Kenyan Rhino Information Management System (1 wk Aug); Yr 1: On-site training of field rangers by newly trained local instructors with support from Darwin Fellows in rhino monitoring techniques and data recording (10 wks Aug-Oct)
REPORTING	Yr 1: Development of rhino annual national and park status reporting templates (2 wks, Mar); Yr 2: Workshop for training of rhino coordinator, rhino scientist and rhino officers/park researchers in detailed population data analysis and preparation of annual status reports (2 wks Apr); Yr 2: Production of first annual park status reports (1 wk Apr); Yr 2: Synthesis and interpretation of first annual national status report (1 wk Apr); Yr 3: Production of second annual park status reports (1 wk Apr); Yr 3: Synthesis and interpretation of second annual national status report (1 wk Apr); Yr 3: Production of third annual park status reports (1 wk Mar); Yr 3: Synthesis and interpretation of third national status report (1 wk Mar).
ASSESMENT/ MANAGEMENT	Yrs 2-3: 6 monthly assessment of training, data quality, entry and reporting procedures, and any on-site training by rhino scientist and Darwin Fellows (Jun, Dec); Yr 2-3: Special sittings of the Kenyan Rhino Management- and Rhino Technical Committees held to jointly review the findings of the annual status reports and work through the decision-making process that will identify what rhino management activities will be needed during the forthcoming period The objective is to establish best practices within these committees on dealing with and planning from these status reports (May); Yrs 1-3: 6 monthly reports sent to Darwin Initiative (Apr, Oct); Yr 3: Final project report sent to Darwin Initiative (Oct).

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EDUCATION, TECHNICAL SUPPORT & TOOLS	Yr 1: Development and implementation of GIS park maps and enhanced Rhino Information Management system (10 wks Apr-*Oct*); Yr *1*: Rhino conservation education booklet published and distributed to schools (*Jan*); Yrs 2-3: 2 radio broadcasts; Yr 3: Advisory support provided for training of rhino officers/rangers and for habitat assessments as needed.
SCIENTIFIC TRAINING & RESEARCH	Yr 1: Compilation & preliminary analysis of environmental information in each area for development of black rhino ECC model (4 wks, *Jul*); Yr *1*: *Preliminary carrying capacity* model developed (*4 wks, Mar*); Yr *2*: Training of *2* rhino scientists in producing population estimates using RHINO Bayesian Mark Recapture software (1 wk, *Apr*); Yr 2: Manual and databases for black rhino habitat monitoring and assessment developed and training course run (4 wks, *May*); Yr 2: Additional habitat assessment in new & existing rhino areas undertaken (*8 wks*, Jun-Jul); *Yr 2: Habitat assessment reports for new and existing 11 sanctuaries/parks produced (4 wks, Aug); Yr 2: Carrying capacity model finalised, 2 papers submitted for publication (4 wks, Dec)*; Yrs 1-3: Course taught in meta-population species management (Diploma/Certificate in Wildlife Management at KWS Training Institute) (1 wk each year); Yr 1: 2 students enrol in MSc Wildlife Management, Moi University (Aug); Yr 2: MSc field projects initiated (Aug); Yr 3: MSc theses submitted (Aug); Yrs *2*-3: 4 BSc students complete projects on specific biological management topics.; Yr 3: 2 papers submitted for publication.

FINANCIAL ASPECTS

29. **Please state costs by financial year (April to March). Use current prices - do not include any allowance for assumed future inflation. For programmes of less than 3 years' duration, enter 'nil' as appropriate for future years. Show Darwin funded items separately from those funded from other sources.**

Table A: Staff time. List each member of the team, their role in the project rate and the percentage of time each would spend on the project each year.

	2003/2004 %	2004/2005 %	2005/2006 %
United Kingdom project team members and role			
Dr R Amin (Project Leader, advising on rhino matters, software development, training, research & student supervision)	66	46	46
Dr R Emslie (Advising on rhino matters, training & research)	13	5	0
Dr R Pettifor (Project management, research & data analysis, student supervision)	11.5	11.5	7.7
Dr JM Rowcliffe (Advising and researching in ecology & population dynamics, student supervision)	23	23	15.4
Ms K Adcock (Advising on rhino matters, habitat/rhino population analysis, modelling, training & research, student supervision)	63	45	4
Host country/ies project team members and role			
Mr M Mulama (KWS Rhino Co-ordinator; in-country DI project co-ordinator, annual status reporting)	60	60	60
Mr B Okita (KWS Rhino Scientist; research & in-house training, trainee, annual status reporting)	100	100	100
Park Scientists (5 staff; assisting park habitat assessment, trainees)	20	20	20
Park Rhino Officers (20 staff; implement rhino monitoring, data collection & reporting, trainees, subsequently instructors)	100	100	100
Park Rangers (165 staff - both KWS & private sanctuaries; undertaking rhino monitoring and data collection, trainees)	100	100	100

Table B: Salary costs. List the project team members and show their salary costs for the project, separating those costs to be funded by the Darwin Initiative from those to be funded from other sources.

Project team member	2003/2004 £		2004/2005 £		2005/2006 £	
	Darwin	Other	Darwin	Other	Darwin	Other
Dr R Amin						
Dr R Emslie						
Dr R Pettifor						
Dr JM Rowcliffe						
Ms K Adcock						
Mr M Mulama						
Mr B Okita						
Park Scientists (5 staff)						
Park rhino officers (20 staff)						
Park rangers (165 staff)						
TOTAL COST OF SALARIES			305			

*Excluded from Total cost of salaries above & matching funding totals: see #31

Table C. Total costs. Please separate Darwin funding from other funding sources for every budget line.

	2003/2004	2004/2005	2005/2006	TOTAL
Rents, rates, heating, lighting, cleaning, overheads				
• Darwin funding				
• other funding				
Office costs e.g. postage, telephone, stationery				
• Darwin funding				
• other funding				
Travel and subsistence				
• Darwin funding				
• other funding				
Printing				
• Darwin funding				
• other funding				
Conferences, seminars etc				
• Darwin funding *(training courses etc.)*				
• other funding				
Capital items/equipment (please break down)				
• Darwin funding Satellite and topographic maps Digital stills camera (high resolution)				
• other funding GPSs Computers + solar panels + UPS systems, printers Digital cameras Night vision equipment				
Other costs (please specify and break down)				
• Darwin funding Botanist Airfares BSc student research projects (4) MSc Moi University (2x fees & subsistence)				
• Other funding Image analysis GIS Specialist Development of AfRSG Rhino Monitoring Training Courses and material Development of rhino conservation education booklet Development of RHINO 2.0 pop.est. software Statistical software (S-Plus, ESRI Arcview)				
Salaries (from previous table)				
• Darwin funding				
• other funding				
TOTAL PROJECT COSTS				
TOTAL DARWIN COSTS				
TOTAL COSTS FUNDED FROM OTHER SOURCES				

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30. How is your organisation currently funded?

The Institute of Zoology receives a core grant of £ per year from the Higher Education Funding Council for England, representing around 60% of its annual income. The remainder comes from UK Research Council (NERC, BBSRC, ESRC) and EU (Framework 5) grants, other grant awarding research bodies (e.g. Leverhulme Trust, Wellcome Trust) and contracts from government (e.g. DETR, MAFF, English Nature) and non-governmental bodies (WWF, IUCN, CI).

31. Provide details of all other funding sources identified in Question 29 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 funding the project will lever in to carry out additional work during or beyond the project lifetime. Indicate those funding sources which are confirmed.

Salaries are confirmed for all or matched funding of IoZ staff as are all KWS salaries (all stakeholder contributions of salaries (private and government) dedicated to rhino conservation in Kenya exceed p.a.). Overheads plus infrastructure (phone, e-mail, photocopy, library etc.) will also be provided by our respective Institutions KWS will also provide one suitable vehicle for the duration of the project (benefit > as well as allowing use of park accommodation for Darwin Fellows, trainers and trainees at discounted rates (estimated > A Research Fellow from the Institute of Zoology will provide specialist GIS and image analysis input and also UK-based in-house training to the Darwin Fellows

Technical infrastructure (IT hardware and monitoring equipment) provided by NGOs, especially USAID, WWF-Africa and Save the Rhino International will also be fully utilised in this project. Software costs will be provided by IoZ for research purposes and production of reports. Matching complementary time from other NGO-funded work (principally US Fish & Wildlife (RTCF), SADC Regional Programme for Rhino Conservation) by the two rhino specialists in this proposal will also directly feed into this project (principally software development, development of AfRSG rhino monitoring training course and preparation of educational material).

32. Please give details of any further resources sought from the host country partner institution(s) or others for this project that are not already detailed in Questions 29 and 31. This will include donations in kind and un-costed support e.g. accommodation.

It is estimated that stakeholder contributions towards operational costs of rhino conservation within Kenya exceed p.a. KWS will make available considerable additional logistic and infrastructure support (uncosted). This will include local office facilities, park entrance fees, vehicles and accommodation for student research projects and supervision approximating p.a. (*i.e.* distinct from that detailed above).

33. Please separately indicate in Table D the amounts of grant requested under the Darwin Initiative and any confirmed funding/income from elsewhere (where these may be costed). Add together to show total project costs.

Table D Darwin funding request

	2003/2004	2004/2005	2005/2006
Amount of Darwin Initiative funding requested	89626	61060	22276
+ Funding/Income from other sources**	208567	67348	49292
= Total project cost	298193	128408	71568

**** Note: Matching costings given in #32 not included**

34. FCO NOTIFICATION

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

CERTIFICATION 2003/04

On behalf of the trustees *(delete as appropriate)*

Institute of Zoology

Zoological Society of London

I apply for a grant of **£89626** in respect of expenditure to be incurred in the financial year ending 31 March 2004 on the activities specified in paragraphs 21 and 23.

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.

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

Name (block capitals)	Dr RAJAN AMIN
Position in the organisation	Research Fellow

Signed		Date:	10 January 2003

Please return completed form to Defra by 13 January 2003 by e-mail to darwin@defra.gsi.gov.uk or in paper form to Zone 4/A2 Ashdown House, 123 Victoria Street, London SW1E 6DE.