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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

Wildlife Conservation Research Unit (WildCRU)

2. Project title (not exceeding 10 words)

Climate Change and Conservation of Galapagos Endemic Bird 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	Macdonald		Vargas
Forename(s)	David W.		Hernan
Post held	Director		Investigator
Institution (if different to above)			Charles Darwin Foundation
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)

<p>Aims</p> <p>To achieve practical solutions to conservation problems by undertaking original research on aspects of fundamental biology relevant to wildlife conservation and environmental management. We aim to effect improvements in policy, increase awareness of conservation issues amongst a wide public, and train and develop conservation biologists of all nationalities.</p>
<p>Activities</p> <p>Main activities: Fundamental research, species conservation and environmental management, education and outreach, training and development. Main areas of interest: endangered species, behavioural ecology, farming and wildlife, wildlife diseases and pests, and human/animal conflict resolution.</p>
<p>Achievements</p> <p>Since 1992 WildCRU has completed more than 50 international projects, with significant results, published over 300 refereed papers and species action plans and trained 35 students to doctoral level. The research outputs demonstrate how a variety of research methods can bring a rigorous scientific background to conservation problems and have had a substantial impact on policy.</p>

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

1) 162/4/072 Aquatic carnivores 2) 162/7/137 Sanctuaries in Estonia and Belarus 3) Big cat conservation and sustainable development in Southern Africa and 4) 162/10/004 Devising solutions to bushmeat exploitation in the Sanaga-Cross region.

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.

Charles Darwin Foundation (CDF), the official adviser to Ecuadorian Government on Galapagos conservation, has been closely involved in the project design and will be responsible for: 1) scientific research with participation of resident scientists and students recruited from universities 2) project implementation and coordination 3) communication, outreach and publicity 4) logistical support, accommodation, office space 5) GIS hardware and software and 6) co-managing finances with WildCRU.

Galapagos National Park Service (GNPS), the wildlife and resource management authorities for the terrestrial and marine ecosystems, including the Galapagos Marine Reserve (GMR) will 1) co-finance transportation to study area 2) provide Park wardens for monitoring 3) be responsible for publicity, education and outreach of the project in Ecuador in partnership with CDF 4) regulate fishing activities and 5) evaluate DI recommendations for incorporation into management plans.

The Galapagos fishing cooperatives, which represent the principal users of the GMR, will participate in workshops, data collection on fisheries and management of the GMR. Universities (Católica del Ecuador, San Francisco de Quito, Central de Quito and Estatal de Guayaquil) will provide 7 of the 8 Ecuadorian students involved in the project and formal education in biology and conservation biology. The 8th student has been studying at the University of Oxford for a Ph.D. since October 2001.

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?

The University of Oxford and CDF have been research partners since the early 1970s. WildCRU and CDF signed an open-ended agreement for reciprocal training and research in 2001. CDF has an alliance with GNPS which stretches back to 1964 and has several cooperative projects, of which the DI will be one. WildCRU also has a good working relationship with GNPS. The permissions to carry out this project have been granted by the Ecuadorian Government via its representation in GNPS, which manages the local fisheries with the participation of the Galapagos fishing cooperatives. CDF has a long tradition of supporting scientific research and has developed partnerships with Ecuadorian universities for conducting scientific research and monitoring, and for training students.

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.

Letters of support provided by the host country partners confirm their willingness to participate in the project. The Ecuadorian government, via GNPS, has already granted permission to carry out the project and implement recommendations derived from this work. There is regular and ongoing consultation and co-operation between CDF and WildCRU.

CDF and GNPS already have established contacts with local and national media - radio, newspapers and television - to ensure the dissemination of the project objectives, activities, outputs and outcomes so that the local community is fully informed about the project. Wherever possible, we will involve the local communities through open meetings.

PROJECT DETAILS

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

The main objective of the project is the conservation of three endemic and endangered species, the Galapagos Penguin (*Spheniscus mendiculus*), the Flightless Cormorant (*Phalacrocorax harrisi*) and the Mangrove Finch (*Cactospiza heliobates*) and associated biodiversity, by strengthening local capacities for scientific research, practical conservation, ecological monitoring, decision making and sustainable management. This goal will be achieved by the implementation of a series of actions, including 1) conducting scientific research 2) training of Ecuadorian students and park wardens on research and ecological monitoring 3) disseminating outcomes and outputs 4) making recommendations for use in the management plans of the GNPS for the GMR and 5) fostering participatory management among users of the GMR. These actions will help ensure biodiversity, while benefiting and involving local stakeholders. The research component will test hypotheses regarding the role of natural physical factors (sea surface temperature and precipitation) and two anthropogenic factors (introduced black rats and fisheries of sea cucumbers) on the reproductive success, foraging behaviour, dispersion and movements of the endemic bird species.

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

This is a new initiative that will integrate and analyse new data on natural and anthropogenic variables, but will also make use of existing data sets.

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 host country, Ecuador, is a party to the Convention of Biological Diversity signed in 1992. This project will assist considerably with Ecuador's efforts to fulfil obligations under the Biodiversity Convention via the implementation of project outputs and outcomes by GNPS and associated conservation organizations in the Galapagos Islands. The proposed project relates particularly to the following articles: 6 (general measures for conservation and sustainable use), 7 (identification and monitoring of biodiversity), 8 (in situ conservation), 10 (sustainable use of components of biological biodiversity), 12 (research and training), 14 (impact assessment and minimising adverse impacts) and 18 (technical and scientific cooperation). The proposed work has also direct relevance to the Convention on Biological Diversity's (CBD) marine and coastal biodiversity programme, and CBD's cross-cutting issues that relate to indicators, public education, awareness and alien species.

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

It is widely recognized that the biodiversity of Galapagos is unique particularly for its high endemism. More than 90% of the populations of these three endemic bird species occur in western Galapagos, where the project will be carried out. Birdlife International lists these three species as being globally threatened due to their small population sizes and ranges. Two major threats to these species can be identified. Firstly, western Galapagos is the site of more than 90% of the current fisheries activity exploited from the Archipelago. At present the trend is one of greatly increasing conflict due to the growing human population and associated fisheries, with unknown impacts on the ecosystem. Secondly, black rats, which are predators that have affected other island bird species, have been introduced to the Islands and pose a threat to the bird species. Furthermore, it is recognised that natural factors such as the El Niño Southern Oscillation (ENSO) can cause drastic population changes. However, the mechanisms underlying the effects of ENSO on the demography and population dynamics of the three endangered species have been insufficiently researched. At present we do not know how the dynamics of the interactions between natural and anthropogenic factors influence population changes of these three endangered bird species. It is expected that the outputs of this work will assist in the zoning of the GMR and future strategic planning in accordance to the CBD.

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

After petroleum and banana exports, tourism is the third most important source of income in Ecuador. The tourist industry is the primary income provider for the population of Galapagos, which currently numbers nearly 19,000 people. Birds are a major tourist attraction in the Archipelago and therefore one of the key icons of ecotourism on the Islands. If species such as the Galapagos penguin, the Flightless Cormorant or one of the famous Darwin's Finches (of which the Mangrove Finch is one) become extinct, or if their associated habitat is drastically altered, it will be a tremendous loss not only in terms of biodiversity but also for the economy of Ecuador and particularly the local inhabitants of the Galapagos Islands. By helping secure the future of these endemic bird species, the project will ensure a sustainable tourist industry and provide educational opportunities for locals.

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.

The main impact of this work will be the long term preservation of the biodiversity of western Galapagos by: 1) providing recommendations for the modification of the operational and management plans of the GNPS for the GMR; 2) providing qualified local capacity to influence the decision-making process of the Participatory Management Board (PMB) and the GMR Inter-Institutional Management Authority, where agreements on fishing sites, fishing quotas and conservation measures are made; and 3) disseminating information on project objectives, outputs and outcomes through workshops, technical reports, press releases, conferences, local television and radio, and peer reviewed and institutional publications.

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

This project will result in a significant number of local staff becoming fully trained to carry out tasks associated with the preservation of biological diversity. It will increase understanding of the effects of natural and anthropogenic factors which can assist wildlife managers in developing and implementing successful bird species recovery plans and thus avoid extinctions of biodiversity. The data derived from this project will be key elements in the long term conservation strategy of the three endemic species and associated biodiversity. The project may also be used as a case study and be applied to other protected areas of Ecuador, and elsewhere in the world, and provide an example of how areas of high biodiversity may be scientifically managed and their biodiversity preserved for posterity, using limited economic resources and few monitored variables.

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

WildCRU, CDF and GNPS are well established with the necessary skills and experience. We consider that the agreements and relationships between them are secure. The current legislative framework, especially the Galapagos Special Law for the Conservation and Sustainable Management of the Galapagos Islands is robust. The project partially addresses the shortage of adequate scientific skills and properly trained rangers. Finally, the CDF and GNPS also have designated the marine reserve programmes as a high priority for current and long-term fundraising activities.

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?

This project is distinctive from other projects that focus solely on either research, training, communications or participation, as it addresses the need for integrating all of these elements in the conservation of biodiversity. It is thus holistic in nature, integrating conservation of biological diversity with sustainable development in one of the most important areas of diversity and endemism in the world. Importantly, the recommendations derived from this work will inform the conservation strategies of the management authorities, as the GNPS fully supports the project. This project fits very well with the philosophy behind the Darwin Initiative, for the following reasons: 1) Ecuador is poor in economic resources and rich in biodiversity; and 2) A central aim of the project is to strengthen local capacities in order to help develop sustainable solutions to the current conflict between the expansion of the local fishing industry and preservation of biodiversity. The Darwin Initiative logo will be featured conspicuously in project outputs, on field equipment and in appropriate places on the WildCRU and CDF 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.

This project builds on a previous DI project "Revision of the Galapagos Marine Management Plan" (Ref. 162/06/174), which contributed to the revision and completion of the GMR management plan in 1999. Our project is complementary to two other DI projects carried out in the terrestrial area of the GNP: 1) "Threatened flora of Galapagos: a scientific basis for conservation" (Ref. 162/07/078) and 2) "Terrestrial invertebrate biodiversity in Galapagos: Training and Collection rehabilitation"(Ref. 162/09/010). All these DI projects are similar to ours in the sense that they all focused on the conservation and management of the most endangered terrestrial and marine biodiversity. The outputs and outcomes derived from our project are different as they are more interdisciplinary than previous projects. We will endeavour to disseminate DI project outputs and outcomes jointly.

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?

The project includes training and development for 8 university students and 8 wardens from the GNPS. All 16 trainees will be Ecuadorians. Six of the 8 university students, preferably permanent residents of the Galapagos, will be selected by appropriate academic qualifications and will come from 4 universities in Ecuador. 3 undergraduates will work for six consecutive months each (one student per annum, 50% of year time). Another 3 undergraduates will work in the field between academic terms (one student per annum 17% of year time). The 7th undergraduate, already working at the CDF as a GIS technician, will get further training in GIS to comply with GIS outputs of this project. The 8th student, born in Galapagos, is studying for a Ph.D. in conservation biology at the University of Oxford from 2001 to 2005. He will be working as a link between the UK and Ecuador and will play a key role in the execution of the project and the transfer of skills and expertise to undergraduate students and park wardens. The effectiveness of the training and trainee outcomes will be measured in terms of performance criteria: high quality data collection and analysis, report writing, number of hours spent in the field and quality of field reports submitted. For the Ph.D. student, criteria will be: completion of thesis, writing of manuals and management plans, and submission of publications.

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.

The results of the research programme will be proposed for inclusion by GNPS into their management strategies and plans for the GMR. Technical recommendations and new zoning schemes for the Galapagos Marine Reserve will be presented to the fishing cooperatives.

The partner organisations are well established but there is a shortage of appropriately trained scientists and wardens. By providing local residents with specialist skills and the ability to pass on their skills and knowledge we will help to ensure that the work continues beyond the life of our project. The trained GNPS wardens will continue to collect data in the field and work for the GNPS and GMR after the completion of the DI project.

The newly qualified local scientists, some of them working at the CDF, will continue to provide advice to the GNPS. Core funding from the Ecuadorian Government (via GNPS) and other private benefactors (E. g. Seaworld via CDF) is in place to continue ecological monitoring.

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

Project implementation timetable

Date	Key milestones
2003/2004	
April-May 2003	Project planning and analysis of sea surface temperature from NOAA and CDRS (1965-2002)
June-July 2003	Purchase of main project equipment
August 2003	Training of students and park wardens
September 2003	Penguin, Cormorant and rat surveys
October 2003	Six month report
February 2004	Mangrove Finch and rat survey
April 2004	Annual Report
2004/2005	
May-July 2004	Analysis of Mangrove Finch and Cormorant data
August 2004	Workshop in Galapagos, training of students and park wardens
September 2004	Penguin, Cormorant and rat surveys
October 2004	Six month report
February 2005	Mangrove Finch and rat Survey
April 2005	Annual report
2005/2006	
May-July 2005	Data analysis
August 2005	Training of students and park wardens
September 2005	Penguin, Cormorant and rat surveys
October 2005	Six month report
October 2005	Ph.D. thesis completed
January 2006	Workshop in Galapagos
February 2006	Mangrove Finch and rat surveys
March 2006	Submission of a manuscripts to a peer-reviewed journal
April 2006	Management plans completed and submitted to the GNPS
April 2006	Annual report
July 2006	Final report, submission of two manuscripts to peer-reviewed journals
	Note: Data on fisheries will be collected during fishing seasons by park wardens and CDF staff. Dates for workshops may change as they may be influenced by fishing seasons.

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 most significant outputs (increased knowledge of effects of natural and anthropogenic factors on the three endangered species, 16 trained Ecuadorians, management plans, manuals, papers and other forms of dissemination) will contribute toward achieving increased local expertise in scientific research, ecological monitoring and sustainable management of Galapagos biodiversity: students will be more qualified in scientific research and management techniques. Monitoring data on natural and anthropogenic factors will provide the baseline information to understand population changes of the three bird species and associated biodiversity. Manuals, GIS database, publications and other vehicles of disseminating information will be used as tools to influence environmental policy for sustainable management and long term preservation of Galapagos biodiversity.

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)
2003/2004		
Aug. 2003	4A & 6A	Initial training of 2 students and 2 park wardens in faunal surveys
Sept.2003	18C & 19C	Items on local TV and radio in the host country
Nov.2003	15A	National press release in host country
Feb. 2004	22	Seabird colonies and mangrove sites established for long term monitoring
2004/2005		
May 2004	15C	National press release in UK, CDF web site
Jul. 2004	10	Manual for surveying penguin and cormorants completed
Aug. 2004	4A & 6A	Training of students and park wardens
Aug. 2004	14A	Workshop in Galapagos (project dissemination and evaluation)
Sept.2004	14B	Preliminary findings presented at a conference
Jan. 2005	10	Manual for surveying the Mangrove Finch & rats completed
Feb. 2005	18C	Items on local TV programmes in host country
Feb.2005	4A & 6A	Training of students and park wardens continues
2005/2006		
Apr. 2005	19B	National radio interview in UK, CDF web site
Aug.2005	4A & 6A	Training of students and park wardens
Oct. 2005	1A & 1B	Ph.D. thesis submitted and Galapagos-born student attains Ph.D.
Jan. 2006	14A	Workshop in Galapagos (project dissemination and evaluation)
Jan.2006	17B	CDF & GNPS & *GCT dissemination network enhanced
Feb.2006	18C	Items on local TV programmes in host country
Mar. 2006	12A	Multilayered database completed and handed over to the host country
Mar.2006	9	Bird species management plans, in Spanish, completed & handed over GNPS
Mar.2006	14B	Main DI project outputs presented at conferences
Mar.2006	15A & 15C	National press releases in host country and UK
Mar.2006	11B	Submission of a manuscript to a peer-reviewed journal
Apr. 2006	20	Capital items, GPS and other assets handed over to CDF
July 2006	11B	Submission of two papers to peer-reviewed journals
		Main results published in CDF & GNPS annual reports (2004, 2005 & 2006)
		Project progress published on CDF & GCT Web sites (2004, 2005 & 2006)
		* GCT= Galapagos Conservation Trust in UK

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.**

To determine if the project and its components are being conducted as planned, WildCRU, CDF and GNPS will carry out an internal project implementation evaluation, from the project start-up and during the lifetime of the project. This progress evaluation will determine whether the project is meeting its stated purpose, objectives and output and milestones according to the proposed timetable. Towards the end of each year, a major evaluation will take place to assess strengths and weaknesses and take corrective measures for the remaining part of the project. We will also assess the cost-effectiveness of what has been accomplished, benefits to trainees participating in the project and the components that were most effective. The evaluators will aim to determine how dissemination activities and outputs are providing feedback to inform decision making at all levels (local, national and international) and how research and training have contributed to understanding the key factors in the long term conservation of the studied bird species. Outcome indicators will serve as a baseline for measuring success. At the end of the project, we will evaluate whether the project is replicable, transportable and applicable to other parts of the world.

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

The main project activities, timetables and staff responsible for their execution will be included in the annual operational plans of CDF and GNPS and will be annually evaluated using standardized internal procedures currently in place. We will apply the participatory principle by promoting the participation of all partners in the evaluation of the project. The host country partners will also evaluate the project during two workshops that will be carried out in Galapagos: the first at midterm of the project and the second towards the end. The Ecuadorian universities and fishing cooperatives will evaluate themselves and the partnership with the other organizations involved during the workshops.

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

We have conducted pilot studies, developed monitoring techniques and tested methodologies which are cost-effective and efficient. An interdisciplinary team will be constantly evaluating progress to identify potential economies and improvements whenever opportunities arise. For the purchase of equipment we will carefully scrutinize alternative manufacturers and suppliers to identify the least expensive options without compromising quality.

Having access to GNPS boats and to established local media contacts and channels to promote media coverage, means we will save substantial funds by avoiding the high costs of marine transportation and publicity.

- 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 report	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
Final report	1 April 2006 – project end date	1 July 2006	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
<p>Goal:</p> <p>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</p> <ul style="list-style-type: none"> 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 			
<p>Purpose</p> <p>To increase local expertise for scientific research, ecological monitoring and sustainable management in the Galapagos Islands.</p> <p>To understand the mechanisms of natural and anthropogenic factors on the conservation of threatened endemic bird species and associated biodiversity in rich upwelling ecosystems of the Galapagos Islands.</p>	<p>Increased understanding of the role of natural and anthropogenic factors affecting threatened species.</p> <p>Increased ability to predict population changes of threatened species and make timely management actions to mitigate impacts.</p> <p>Effective management of the GMR in western Galapagos.</p>	<p>Reduction of frequency of illegal fishing and campsites on western Galapagos.</p> <p>Reduced conflicts among users of the GMR.</p> <p>GNPS and CDF trainees participate in the decision making process.</p> <p>Sustainable use and management of the GMR.</p>	<p>Managers from the GNPS and GMR incorporate new knowledge into the Management Plans of both organizations.</p> <p>Fishing sector accepts technical recommendations and respects new zoning schemes for the GMR.</p> <p>Galapagos Special law is respected and enforced at all times.</p>
<p>Outputs</p> <p>UK and host country partner organizations develop a unique partnership to participate in planning process and implementation of project outputs.</p> <p>Management plans, manuals technical reports and papers published and distributed.</p> <p>Multilayered GIS database that describes distribution, densities, and foraging ranges of bird species with physical parameters and fishing areas of the GMR.</p>	<p>Minimum of 8 Ecuadorian park wardens trained in ecological monitoring techniques, 6 undergraduate students with training in research methodologies, one in GIS, and one Galapagos-born student to pursue further education leading to Ph.D. qualifications in conservation biology.</p> <p>Number of manuals, management plans, workshops, reports, papers, Ph.D. thesis, conferences, and presentations on local radio and television.</p>	<p>Participatory workshops between fishing sector, wildlife managers and scientists will disseminate preliminary research outputs.</p> <p>Technical reports for the GNPS, CDF and PMB.</p> <p>Publication of manuals and management plans for the endangered bird species and for controlling black rats.</p> <p>Publication of main outcomes on a Ph.D. thesis, CDF web site and annual report, and 3 peer reviewed publications.</p>	<p>Trained park wardens continue to collect data in the field and work for the GNPS and GMR after the completion of the DI project.</p> <p>Ecuadorian (undergraduate and Ph.D.) students use CDF facilities, participate in project, and provide scientific advice to the GNPS-GMR and fishing cooperatives over the lifetime of DI project.</p> <p>Funding is in place for long-term ecological monitoring and adaptive management.</p>
<p>Activities</p> <p>Physical parameters</p> <p>Population surveys</p> <p>Training</p> <p>Biological monitoring</p> <p>Experiments with rats</p> <p>Outcomes dissemination</p> <p>Workshops and Ph.D. Thesis</p> <p>Publications</p>	<p>Activity Milestones (Summary of Project Implementation Timetable)</p> <p>Yr1. Project planning and design; purchase of project equipment. Weather devices deployed.</p> <p>Yr1, Yr2 & Yr3. Population surveys of three bird species</p> <p>Yr1, Yr2 & Yr3. Training in Ecuador (GNPS staff) and UK (GIS technician and Ph.D. student)</p> <p>Yr1. Marking of individual birds. Yr2 data collection. Yr3 continue data collection and analysis</p> <p>Yr1, Yr2 & Yr3. Experiments with black rats to determine predation rate on Penguins and M. Finch</p> <p>Yr1, Yr2, & Yr3. Enhancing public understanding through media: Press releases, TV/Radio spots, CDF annual reports, CDF website, GCT newsletter Yr3. Submit final DI report.</p> <p>Yr2 & Yr3 Workshops. Yr3, Ph.D. thesis completed</p> <p>Yr3. Manuals published and distributed, submission of papers to peer reviewed journals.</p>		

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.

	2002/2003 %	2003/2004 %	2004/2005 %
United Kingdom project team members and role			
Professor David Macdonald, project leader (WildCRU)	7	7	7
Dr. Paul Johson, analyst (WildCRU), GIS expert (OXFORD U.)	4	4	4
Dr. Laura Handoca, publications (WildDCRU)	3	3	3
Host country/ies project team members and role			
Hernan Vargas, investigator (CDF) and Ph.D. student (OXFORD U.)	95	95	95
3 undergraduate students (ECUADORIAN UNIVERSITIES): 1 p.a.	50	50	50
3 undergraduate students (ECUADORIAN UNIVERSITIES): 1-2 p.a.	17	17	17
Washington Llerena, undergraduate student and GIS technician (CDF)	10	20	30
Lcda. Ana Maria Loose, education and communication (CDF)	2	2	2
Dr. David Wiedenfeld, investigator (CDF)	10	10	10
Dr. Howard Snell, scientific project adviser (CDF)	3	3	3
Lcdo. Fabian Oviedo (GNPS)	2	2	2
8 park wardens to be assigned to the project (GNPS): 2-3 p.a.	15	15	15
Dr. Carlos Valle (U. SAN FRANCISCO DE QUITO)	2	2	2

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
Prof. David W. Macdonald						
Dr. Paul Johnson						
GIS expert UK						
Dr. Laura Handoca						
Msc. Hernan Vargas						
3 undergraduates (50%)						
3 undergraduates (17%)						
Washington Llerena						
Lcda. Ana Maria Loose						
Dr. David Wiedenfeld						
Dr. Howard Snell						
Lcdo. Fabian Oviedo						
8 Park Wardens (15%)						
Dr. Carlos Valle						
TOTAL COST OF SALARIES						

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				
• other funding				
Capital items/equipment (please break down)	12,200			
• Darwin funding Temperature loggers and rain gauges Devices for monitoring birds Pits & scanners				
• other funding Temperature loggers and rain gauges Devices for monitoring birds and black rats Hardware				
Other costs (please specify and break down)				
• Darwin funding Tents, backpacks, VHF radios & other field equipment Consumables Publications and workshops Logistical & adm. support Charles Darwin Foundation				
• other funding Field equipment Consumables Transportation fares and customs fees host country Contingencies				
Salaries (from previous table)				
• Darwin funding				
• other funding				
TOTAL PROJECT COSTS				
TOTAL DARWIN COSTS				
TOTAL COSTS FUNDED FROM OTHER SOURCES				

30. How is your organisation currently funded?

Diversity of grants, from charitable sources including NGOs , private benefactors, corporations together with grants and contracts from statutory agencies for conservation.

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.

The Galapagos National Park Service: confirmed probable. Transportation costs from Santa Cruz Island to western Galapagos, salaries for 8 Park wardens working in biological monitoring (birds and rats), communications and project dissemination.

The Charles Darwin Foundation: confirmed. In GIS hardware, software, data management systems and field equipment, salaries of investigators and staff involved in communications and project dissemination.

Swarovski Optiks: confirmed, probable. Currently funds student stipend for Ph.D. and part of research expenses. Will continue to fund these costs until October 2004.

Rufford Ph.D Grant: confirmed. Research components of the Mangrove Finch and Ph.D. university fees.

Seaworld Inc: probable. Has funded annually 10-day Penguin and Cormorant Surveys in the last three years and is likely to continue funding these surveys in 2003 and 2004.

Universidad de San Francisco de Quito: Salary, adviser on cormorants.

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.

The scholarships given by the CDF to university students that have permanent residence in Galapagos are financed with revenues from the CDF Kiosk and private benefactors. The CDF will also provide reduced prices for accommodation. TAME airlines providence reduces airfares for the students and investigator permanently residing or temporarily working in the Galapagos.

The Galapagos Conservation Trust (GCT) in UK will cooperate in project dissemination through publication of project progress and outputs in the GCT newsletter. We will also apply to British Airways travel awards and try to get some free tickets from UK to Colombia (BA does not fly to Ecuador, and travel awards are only provided during low season).

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	40,376	33,074	46,550
+ Funding/Income from other sources	58,467	52,094	28,453
= Total project cost	98,843	85,168	75,003

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/~~company~~ (delete as appropriate)

I apply for a grant of **£120,000** in respect of expenditure to be incurred in the financial year ending 31 March 200⁶4 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)	PIERRE ESPINASSE
Position in the organisation	HEAD OF RESEARCH INT ADMINISTRATION

Please re urn 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.