DARWIN INITIATIVE FOR THE SURVIVAL OF SPECIES : APPLICATION FOR GRANT FOR ROUND 9 COMPETITION

Please read the accompanying Guidance Note before completing this form. Give a full answer to each section; applications will be considered on the basis of information submitted on this form. Applicants are asked not to use the form supplied to cross refer to information in separate documents except where this is invited on the form. The space provided indicates the level of detail required but you may provide additional information on a separate sheet if necessary. Copies of this form are available on disk or by e-mail on request. You are asked also to complete the summary sheet attached at the end of this form. Although you may reproduce this sheet in a reasonable font, you should not expand it beyond an A4 sheet (leaving the allocated space for DETR comments to be made) as additional information will not be taken into account.

1. Name and address of organisation

The Society for Environmental Exploration, in association with the ***Institute of Oceanography and Marine Science, Toliara, Madagascar***

2. Principals in project

Details	Project leader	Other UK personnel (if working more than 50% on project)	Main project partner or co-ordinator in host country
Surname	Stanwell-Smith	Barnes	
Forename(s)	Damon	David K A	
Post held	Research Manager	Marine Ecologist	
Institution (if different to the above)		UCC Cork	IHSM - Institut Halieutique et des Sciences Marines
Department	Research	Zoology	
Telephone			
Fax			
Email			

Note:
Institutional support will be provided in the host country by the Institut Halieutique et des Sciences Marines (IHSM), main contacts here will be: Dr Eduard Mara, IHSM Director and Dr Manwai Rabenevanana, Director of Research
Please provide a one page CV for each of these named individuals.

3. Project title (not exceeding 10 words)

MADAGASCAR MARINE BIODIVERSITY TRAINING PROJECT

4. Abstract of study (in no more than 750 characters)

A PROGRAMME OF TRAINING IN MARINE BIODIVERSITY AND MONITORING TECHNIQUES TO FORM A CORE OF EXPERTISE NECESSARY TO COLLECT MARINE BASELINE DATA AND TO MANAGE AND MONITOR RESOURCES IN THE ANAKAO COASTAL REGION. THE PROGRAMME WILL FACILITATE CONTINUED TRAINING AND WILL EMPLOY NEWLY TRAINED PERSONNEL IN THE DEVELOPMENT AND IMPLEMENTATION OF A LONG TERM MONITORING PLAN TO ENABLE THE NATIONAL ENVIRONMENT OFFICE TO MEET THE DATA REQUIREMENTS OF MADAGASCAR'S NATIONAL ENVIRONMENTAL ACTION PLAN.

5. Timing. Give the proposed starting date and duration of the project.

July 2001 for 12 months.

6. Describe briefly the aims, activities and achievements of your organisation. (Please note that this should describe your unit, institute or department within a university.)

Aims

To undertake field research into environmental issues and implement practical projects contributing to the conservation and sustainable utilisation of natural resources and habitats in developing countries. To promote and develop links between scientists in the host country and elsewhere, and to provide training and field research opportunities to students and technicians from developing countries and from the UK.

Activities

Development and implementation of research programmes and conservation projects in collaboration with national research institutions, government departments and scientists in the country of operation. Scientists and students from local institutions participate in field work with scientists and research assistants from the UK.

Structure:

The Society is based in London with seven full-time office staff, it has field offices in Tanzania and Vietnam and country representatives in Mozambique and Madagascar. 42 field staff and approximately 200 volunteer research assistants participate in overseas projects each year.

Achievements

- To date the Society has produced 154 technical reports and 107 publications (as of October 2000)
- In January 1999, The Society received the status of "sponsoring establishment" of the Open University, enabling us to confer higher degrees (Bphil/Mphil/PhD) to participants undertaking appropriate research on "Frontier" projects.
- In May 1999, The Society was admitted as a member of the World Conservation Union (IUCN) as a National NGO.
- Over 40 Tanzanian and 20 Mozambican fisheries officers, volunteers and students have been trained in marine biodiversity monitoring and assessment techniques on various projects of the Society's Marine research programmes (1989 - present).
- Over 80 Vietnamese students and scientists have been trained in field survey techniques on The Society's on going forest research programme (1993 to present) in Northern Vietnam; and 45 Tanzanian forestry officers have been trained in assessment and monitoring techniques.
- Over 2200 graduate and undergraduate students from the UK and elsewhere have participated in The Society's field research programmes. All have received training in biodiversity survey techniques, working in collaboration with host country scientists.

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

Yes:
In 1995, for the period January 1996 to April 1998: The Society, in collaboration with the Tropical Marine Research Unit of York University, received funding for a programme of marine research and training in the Quirimba Archipelago, Northern Mozambique.
The project was completed successfully, with the production of 6 technical reports for the Ministry of Environmental Affairs, Mozambique (MICOA), nine internationally peer-reviewed scientific papers and the training of 20 Mozambican students/ministry staff in marine ecological monitoring techniques and SCUBA.
The Quirimba Archipelago is now the focus for an 8 million US$ coastal zone management initiative, funded by the GEF/World Bank, its strategy and aims entirely facilitated by the Darwin Initiative funded reports produced by the Society.

8. Which overseas institutions, if any, will be involved in the project? Please explain the responsibilities of these institutions.

The IHSM will be the main collaborating organisation. It has been agreed they will assist in sourcing a suitable counterpart trainer for the project. Dr Man-Waï Rabenevanana, the IHSM research director, will be involved in selection of a suitable counterpart trainer, as well as advising on selection of trainees to participate in the proposed project.
Agreements have also been made with the Universities of both Antananarivo and Toliara, from where student participants will be selected. Dr Vololoniaina Jeannoda of the University of Antananarivo has agreed to assist in student selection.
The National Office of the Environment will be involved in the adoption of the monitoring programme into the National Environmental Action Plan. The Director of ONE, Dr Heritiana Randriamiarana and the technical advisor, Andrew Cooke, will advise in selection of local officers to undertake the training programme.
The Ministry of Higher Education has been invited to advise in evaluation of the training materials produced by the proposed project.

PROJECT DETAILS

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

To aid marine resource security by providing skills to monitor and manage marine biodiversity.

This will be achieved through the provision of training to fisheries officers, community representatives and personnel/students of the Institute of Oceanography and Marine Science (IHSM) in sustainable resource use and marine biodiversity survey/monitoring methods. Thus creating a core team of expertise, with the necessary skills to collect marine baseline data and to manage and monitor resources in the Anakao coastal region. Training materials will be produced to enable wider and continued community biodiversity monitoring.

The project will also produce a habitat monitoring plan for the area to add to the marine and coastal component of the (EMC) of the National

Environmental Action Plan (PNAE) which will be based on permanent monitoring sites established during the project.

10. Is this a new project or the continuation of an existing one?

This is a new project, which will share facilities at a location in Madagascar where The Society has been operating since January 2000.

11. What is the evidence for a demand or need for the work? How is the project related to conservation priorities in the host country(ies)? How would the project assist the host country with its obligations under the Biodiversity Convention?

How was the work identified?

Madagascar has the longest coastline of any African country (4800km), with 1000km of coral reef, including the longest barrier reef in the Indian Ocean. The problems faced by terrestrial wildlife are being addressed, by international monetary aid for conservation, and governmental commitment. However, investment in marine conservation and management is scarce. To date there is only one Marine National Park and one Special Reserve. Numerous recommendations for marine protection and management have been made.
Two planning visits were made by Damon Stanwell-Smith of the Society, at the invitation of Mr Andrew Cooke (FAO funded marine advisor and technical assistant to the Ministry of the Environment in Antananarivo). A five year Memorandum of Understanding was signed with the Institut Halieutique et de Science Marines (IHSM), in Toliara, SW Madagascar (copy attached). IHSM is the regional co-ordinator of marine research in Southern and Western Madagascar.

How is the project related to conservation priorities in the host country?

The Institute of Oceanography and Marine Science (IHSM) have identified that a major lack of time and funds have been made available for the requirements of the marine and coastal component (EMC) of the National Environmental Action Plan (PNAE), to achieve anything more than rapid surveys of a limited number of coastal sites.
Anakao, the proposed location of the project, has been identified a high priority marine site for biodiversity protection and ecotourism.
The proposed training will enable monitoring to be sustained by Malagasy scientists, providing the necessary information required for effective biodiversity resource management.
In addition it is recognised that there is a lack of funding provided for Malagasy students to conduct undergraduate/graduate independent research.

How will the project assist the host country meet its obligations under the Biodiversity Convention?

The proposed project will establish a programme of training to monitor and manage marine biodiversity, utilising the experience of The Society in tailoring training to the specific needs of Western Indian Ocean coastline communities.

12 In what ways can this project be considered a Darwin project? How does the project relate to the Darwin principles? How would the project be advertised as a Darwin project and in what ways would the Darwin name and logo be used?

Why a Darwin Project?
Madagascar is considered to be the "Laboratory of Evolution", having been isolated for some 160 million years from other landmasses. As such it is home to the highest levels of endemism observed anywhere in the world, while also being home to 14 million impoverished people. The human population has doubled since 1960 and is ever more reliant on coastal resources as the much heralded deforestation of the island continues, with only 10% of the original forests still standing.
The proposed project will be a collaborative venture, involving both British and Malagasy expertise to empower local personnel in the essential skills of marine biodiversity monitoring.

Darwin Principles?
The proposed project addresses 3 of the 5 target areas of Darwin Initiative funding, namely:
1) ***Training:*** Participants will receive field training *in-situ*, which will be directly related to the habitats they will be monitoring in the future
2) ***Research:*** The techniques taught will enable independent ecological and biodiversity research to be undertaken. Such research will lead to a greater understanding and awareness of the value of both biodiversity and sustainable natural resource management.
3) ***Biodiversity convention commitments:*** The proposed training will facilitate sustainable biodiversity monitoring, essential if long-term resource management is planned. The data collected following training will feed directly into the National Environmental Action Plan (PNAE), to which the IHSM contribute from Southern and Western Madagascar.

Promoting Darwin?
We would market the project alongside the other programmes that The Society runs. The programme in Madagascar is new for the Society and so extra publicity will be designed to promote these activities. All literature, reports, newsletters, articles, promotional material and The Society website will acknowledge Darwin Initiative support; including the use of the Darwin Initiative logo.
Several media outlets (including two film companies, national press and diving magazines) have already expressed interest in covering the Society's work in Madagascar, the proposed project would also benefit from exposure via these media.

13. Set out the proposed timetable for the work, including the programme's measurable outputs using the attached list of output measures.

Work Programme
1) Recruitment of counterpart trainer, with assistance from our collaborating Institute in Madagascar: the IHSM.
2) Selection of suitable trainees, interviewed by project staff.
3) Throughout the year four training periods, each of eight weeks duration, will be held to coincide with the ten-week field phases of the Society's Madagascar programme. Six trainees will attend each training period.
4) A training programme will be conducted of five weeks duration. Trainees will each be given a set of fins, mask and snorkel to enable

them to conduct future monitoring work.
5) The trainees will then conduct a three-week research project utilising the skills taught and practised. They will work in teams, developing their own monitoring schedule. Each team will produce a report of the project undertaken.
6) Permanent monitoring sites in the Anakao coastal region will then be identified, with a proposed monitoring plan devised.
7) At the end of each eight week training period a workshop will be held in Anakao to present the reports by trainees, and to encourage feedback from the wider local community.
8) A training manual will be produced by the staff of the project, with additional input from workshops to present the input from the trainees; to be produced in French, English and Malagasy.
9) At the end of the year of training programme, a presentation will be made at the IHSM in Toliara, to:
i) present the training manual to the wider community of biodiversity monitoring workers
ii) to allow representative trainees to present the results of their individual projects to the staff of the Institute, and invited guests from the region.
iii) to propose a long-term monitoring plan for inclusion in the National Environmental Action Plan (PNAE)
10) A final report will be prepared for collaborating institutions, the Darwin Initiative, and interested parties.
11) The Society and the IHSM will jointly prepare a funding proposal for a long-term management programme for the region, utilising the personnel trained in the project, to be submitted to suitable bilateral and multilateral donors.
12) The IHSM has established a forum for exchange of ideas, and work possibilities for its students/personnel, managed by the IHSM research director: Dr Man-Waï Rabenevanana. The trainees form the proposed project will be invited to join this forum.

The proposed project format is a development of a highly successful training programme utilised by The Society in 1996-1998 in Mozambique, and in 1998-1999 in Southern Tanzania. Specific local training needs and requirements will be built into the programme. The training elements have been listed in Question 15.

Measurable Outputs

Training outputs (undertaken quarterly, completed by June 2002)

4C **12** postgraduate students to receive training
4D **96** training weeks will be provided (eight weeks per trainee)
5 **1** counterpart trainer will receive training and experience for 12 months
6A **12** fisheries officers/ local community representatives will receive training
6B **96** training weeks will be provided (eight weeks per trainee)
7 **3** manuals to be produced by July 2002 (training manual: one each in French, English, Malagasy)

Research Outputs (completed by July 2002, manuscript submission by Dec 2002)

8 **104** staff weeks (two full-time Society staff for 12 months each)
9 **2** (1) habitat monitoring plan based on permanent sites to be produced for the marine and coastal component (EMC) of the National Environmental Action Plan, also to be presented to the IHSM
(2) final project report
11B **1** It will be planned to submit at least one peer reviewed paper on the training programme / monitoring undertaken by the project.

Dissemination Outputs (final presentation in July 2002, newsletter circulated in December and June)

14A **5** One final presentation at IHSM, Toliara at end of proposed project
Four workshops, one to be held at the end of each eight week training period (four during the year)
14B **1** Project staff to attend and present findings at a suitable national/international conference, to be identified
15C ***at least*** **5** progress statements/publicity articles will be produced
16A **2** The Society will produce a 6-monthly newsletter for its Madagascar programme, to include a full update on the proposed project.
16B **1000** circulation in Madagascar
16C **5000** circulation in UK
17B **1** The recently established forum for IHSM personnel will receive 24 new members.

Physical Outputs (snorkelling equipment to be distributed quarterly, monitoring sites identified quarterly)

20 **£ 2570** (A set of mask/fins/snorkel/watch for each trainee, training equipment and reference books will be given to IHSM)

22 **4** (One permanent monitoring site will be established by the trainees each eight week training period)

Financial Outputs (matched funding from The Society will available at the beginning of proposed project)

23 **£24 900 (£104 900)** The proposed project will take place on the site of The Society's new Madagascar Marine research programme. This project will have an annual operations budget of ***£80 000***. In addition, the Society will provide the boat, engine, accommodation and VHF radios to specifically run the proposed project, capital items with a value of ***£24 900***. IHSM is not financially well supported, but will provide office facilities for trainees to write up project work, and will offer evaluation from their senior staff members.

14. Do you know of any other individual/organisation carrying out similar work? Give the details of the work, explaining the similarities and differences.

A Swedish government funded initiative entitled SEACAM (Secretariat for Eastern African Coastal Area Management) is based in Maputo, Mozambique. It organises training workshops and courses to facilitate NGO Capacity building, Coastal Zone management and associated subjects for workers in the Western Indian Ocean.
The overall aims are similar to the proposed project work, although aimed at a more theoretical approach. We feel that the hands-on practical nature of training that The Society has developed is complementary to the work of SEACAM. This conviction has been supported by David Moffat, the senior technical advisor to SEACAM, who has been supportive of the work of The Society in Mozambique and Tanzania and encouraging towards our proposed work in Madagascar.
The Society has been informed by several sources within Madagascar that the proposed work will offer a unique opportunity to potential trainees in the Anakao region, and possibly in the whole of Madagascar.

15. Will the project include training and development? Please indicate how many trainees will be involved, from which countries and what will be the criteria for selection. How will you measure the effectiveness of the training and will those trained then be able to train others? Where appropriate give the length of any training course.

The proposed project has training as its main objective. Training will be provided for 24 Malagasy personnel, with an ideal ratio of 50% postgraduate students, 25% fisheries officers, 25% community representatives; (i.e. 12 students, 6 fisheries officers and 6 community representatives). The Malagasy counterpart trainer will receive extensive on-the-job training and experience throughout their 12 month period of employment provided by the Darwin Initiative, enabling them to undertake programmes and teach more trainers.

Training programmes will cover six topics; Marine Ecology (5 Days); Marine Resources (5 days); Marine Biolgical Survey Techniques (10 days); Small Power Boat Handling (2 days); Fisheries Data Collection (7 days); Marine and Coastal Zone Management (6 days).
Training will be provided during a five week programme, which is followed by three weeks of practical application, for a total of eight weeks intensive work experience for each trainee
Each trainee will present the results of their three week research project in a workshop at the end of the eight week training programme and will provide feedback for the development of future training programmes.
Details of how the effectiveness of the training will be monitored are given in question 18.

16. How will trainee outcomes/destinations be monitored after the end of the training?

- The Society for Environmental Exploration has a five year Memorandum of understanding with the Institute of Oceanography and Marine Sciences in Toliara. We have developed a long-term plan for continued collaborative research and participation in Malagasy marine activities.
- The trainees will have continued access to The Society's research project in Anakao, and will be supported by the marine science forum of the IHSM, as described in point 11 of the Work Programme, in question 13.
- The Society and IHSM will endeavour to ensure that the training manuals produced (in English, French and Malagasy) will be utilised in future training initiatives.

17. How is the work of the project expected to continue after the end of grant period? A clear exit strategy must be included.

- The training will result in 24 competent marine biodiversity monitors, who will have had practical experience in designing and conducting their own monitoring projects in teams. They will also have the necessary equipment to undertake snorkel surveys.
- The Society will continue to work with trainees after completion of the programme, to assist them in developing community based monitoring schedules, where appropriate.
- The habitat monitoring plan, based on permanent sites identified and established during the training programme, will be produced for the marine and coastal component (EMC) of the National Environmental Action Plan. This will be utilised by The National Office of the Environment (ONE), the section of the Ministry of the Environment tasked with co-ordinating coastal zone and marine biodiversity management.
- It is anticipated that the National Office of the Environment (ONE) will adopt the permanent monitoring sites as a component of their undertaking to meet the data requirements of Madagascar's National Environmental Action Plan
- The Society will encourage the IHSM to seek further bilateral funding to develop effective management planning for marine protected areas in Madagascar.
- The Malagasy counterpart trainer will be supported by IHSM to seek further funding to increase training opportunities.

MONITORING AND EVALUATION

18. Describe how progress on the project would be monitored and evaluated in terms of achieving its aims and objectives, both during the lifetime of the project and at its conclusion. How would you ensure that it achieves value for money? What arrangements will be made for disseminating results? If applicable, how would you seek the views of clients/customers?

- Feedback will be sought from all participants, all will be asked to complete a feedback questionnaire. Trainees will be carefully monitored and encouraged to pursue areas of personal interest within the scope of the training programme, and to work in independent teams.
- A senior representative of IHSM will attend the workshop to be held at the end of each training period, to monitor progress made by

trainees after the eight weeks. Recommendations will be acted upon, to develop subsequent training periods, as appropriate.

- Trainees will also be expected to produce a short report based on independent monitoring/research during the final three weeks of their training period. These reports will be marked by the Project co-ordinator and reviewed by a senior staff member of IHSM. Sample reports will be sent to the Universities of Antananarivo and Toliara for external assessment.
- The training manuals in each language will be reviewed by a suitable representative of the Ministry of Higher Education and will subsequently be distributed widely to encourage future training programmes.
- The habitat monitoring plan, based on permanent sites identified and established during the training programme, will be produced for the marine and coastal component (EMC) of the National Environmental Action Plan. This will be utilised by The National Office of the Environment (ONE), the section of the Ministry of the Environment tasked with co-ordinating coastal zone and marine biodiversity management.
- Scientific paper outputs will be publicised by The Society.

19. Logical framework. Please enter the details of your project onto the matrix using the note at Annex B of the Guidance Note.

Project summary	Measurable indicators	Means of verification	Important assumptions
Goal To aid marine resource security by providing skills to monitor and manage marine biodiversity.	• Acceptance after 12 months of the habitat monitoring plan as part of the National Environmental Action Plan; • IHSM seeking further bilateral funding to develop effective management planning for marine protected areas in Madagascar	• Funding proposal for the long-term monitoring plan utilising personnel trained in the project	• Continuation of the National Environmental Action Plan including marine and coastal areas; • Availability of funds and interest of bilateral donors in funding marine and coastal biodiversity work in the region.
Purpose To create a core team of expertise with the necessary skills to collect marine baseline data, and to manage and monitor resources in the	• after 12 month training programmes, employment of newly trained personnel in the implementation of the	• long-term monitoring plan implemented by the National Office of the Environment;	• Anakao coastal region still considered high priority marine site for biodiversity and protection

Anakao coastal region through implementation of a long-term monitoring plan.	monitoring plan and involvement in IHSM forum for the exchange of ideas		
Outputs • 24 Malagasy personnel (postgraduate students, fisheries officers, community representatives) trained in marine biodiversity monitoring; • one counterpart trainer, trained in providing marine biodiversity monitoring training; • one habitat monitoring plan for the Anakao area.	• after 8 weeks of training, personnel will have practical experience in designing and conducting their own monitoring projects; • after 12 months of training and experience the counterpart trainer supported by IHSM to seek funding for further training opportunities; • presentation of habitat monitoring plan to the National Office of the Environment	• The Society will continue to work with the newly qualified trainees after completion of the programme; • further proposals for training programmes; • monitoring plan produced for the Anakao area.	• Continuity of Memorandum of Understanding between the Society and IHSM; • Continued core funding for the Society's work in Madagascar
Activities • four eight week training periods for 6 trainees each; • 12 month training of counterpart trainer; • identification of permanent monitoring sites in Anakao coastal region; • development	• workshops held at the end of each training period where trainees present their project reports; • workshop presentation after 12 months presenting proposed long term monitoring plan using	• Each team of trainees to produce a report of their research projects; • descriptions of permanent monitoring sites presented in final report; • monitoring proposal produced; • funding proposal for	• suitable trainees can be identified by IHSM; • a suitable trainee to be trained as a trainer can be identified; • suitable permanent monitoring sites can be identified for monitoring.

of proposed long-term monitoring plan; • preparation of funding proposal for proposed monitoring plan; • production of training manual	permanent sites and to present training manual; • The Society and IHSM jointly prepare funding proposal for long-term monitoring.	long term management programme for the region; • training manual published in French, Malagasy and English.	

Darwin Initiative Proposal (Round 9, 2000)
Madagascar marine training: **timetable**

component	Financial Year 1									Financial Year 2		
	2001						2002					
month:	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Field phase of Parent Project												
Training period 1												
Training Period 2												
Training period 3												
Training period 4												
Permanent monitoring sites												
Local workshops												
Monitoring/evaluation												
Equipment purchase												
Staff recruitment (with IHSM)												
Trainee selection												
Training manual preparation												
Main reporting												
Final Presentation												