

Submit by 21 January 2005

## DARWIN INITIATIVE APPLICATION FOR GRANT ROUND 13 COMPETITION:STAGE 2

Please read the Guidance Notes before completing this form. Applications will be considered on the basis of information submitted on this form and you should give a full answer to each question. Please do not cross-refer to information in separate documents except where invited on this form. The space provided indicates the level of detail required. Please do not reduce the font size below 11pt or alter the paragraph spacing. Keep within word limits.

### 1. Name and address of organisation

<b>Name:</b> The University of Durham	<b>Address:</b> University Office, Durham, DH1 3HP
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### 2. Project title (not exceeding 10 words)

Environmental educational programme promoting biodiversity conservation on Socotra, Yemen
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### 3. Project dates, duration and total Darwin Initiative Grant requested

Proposed start date:		Duration of project:			
Darwin funding requested	Total (£)	2004/5 (£)	2005/6 (£)	2006/7 (£)	2007/8 (£)
	186,440	45,230	64,325	60,635	16,250

### 4. Define the purpose of the project in line with the logical framework

To ensure, through curricular education, that future generations of people on Socotra know about and are concerned for the sustainable management of their islands' unique flora and fauna heritage. Teachers, many from the mainland and other Arab countries, need appropriate training. The project will work with MoE to include a requirement within the curriculum for children to learn about and maintain respect for their unique natural heritage (including the many practical, medicinal and livelihood values of the plants and the traditional land and livestock management practices that have conserved the biodiversity) and play future roles with EPA to establish and manage the network of community-based protected areas and foster community support for biodiversity conservation. It will convert scientific knowledge into stimulating educational materials.
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### 5. Principals in project. Please provide a one page CV for each of these named individuals

Details	Project Leader	Other UK personnel (working more than 50% of their time on project)	Main project partner or co-ordinator in host country
<b>Surname</b>	Dutton		Al-Eryani
<b>Forename (s)</b>	Roderic William		Abdul-Rahman
<b>Post held</b>	Honorary Fellow		National Team Leader
<b>Institution</b>	University of Durham		Socotra Cons. & Dev. Programme
<b>Department</b>	Geography		Co-ordination Unit
<b>Telephone</b>			
<b>Fax</b>			
<b>Email</b>			

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

Management of biodiversity in the Badia region, north-east Jordan: 96/97-98/99

**7. IF YOU ANSWERED NO TO QUESTION 6 describe briefly the aims, activities and achievements of your organisation. (Large institutions please note that this should describe your unit or department)**

**Aims (50 words)**

**Activities (50 words)**

**Achievements (50 words)**

**8. Please list the overseas partners that will be involved in their project and explain their roles and responsibilities in the project. Describe the extent of their involvement at all stages, including project development. What steps have been taken to ensure the benefits of the project will continue despite any staff changes in these organisations? Please provide written evidence of partnerships.**

Key partners are: Socotra Conservation Fund; UNDP-GoY Socotra Conservation and Development Programme (SCDP); Ministry of Education (MoE); Ministry of Water and Environment (MoWE) Environment Protection Authority (EPA), Socotra Branch. These organisations have been consulted about the proposed project and indicated their support. They are involved in all aspects of its formulation and planning to date. Other organisations with important roles are the Teacher Training College (TTC) at Hadhramaut University and the teachers in the local schools. The SCF, EPA and SCDP have the key liaison roles with them and with MoE and other branches of government in Yemen. MoE is now committed. It has stated that it will: encourage and authorise the work in Socotra as a 'pilot' for this approach to promoting EE, help monitor progress and, in the third year, help evaluate outputs with a view to building the materials and methods into curricula long term and more widely in Yemen.

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

The UK project staff are respected by and known to (in some cases for many years) local community members and the local SCDP/EPA offices. On-going work with teachers and children will be a feature of the project as will liaison in Sana'a between SCDP/SCF and EPA and MoE. The project also has the support of the highly respected Chairman of SCF, who is also Political Advisor to the President of Yemen. Liaison with the local communities about the project is built into the programme and has been central to the on-going work of the EPA Environmental Education (EPA EE) team since its creation.

**PROJECT DETAILS**

**10. Is this a new initiative or a development of existing work (funded through any source?) Are you aware of any other individuals/organisations carrying out similar work, or of any completed or existing Darwin Initiative projects relevant to your work? If so, please give details explaining similarities and differences and showing how results of your work will be additional to any similar work and what attempts have/will be made to co-operate with and learn lessons from such work for mutual benefits.**

This is a new initiative but very much in tune with the work of EPA's EE Section on the mainland and field team on Socotra and with SCDP's current educational awareness initiatives on Socotra and MoE's growing EE concerns. We will draw on the outputs of the DI project ('Biodiversity inventory of the Socotra archipelago', 1996/7) and a GEF project ("Conservation and Sustainable Use of the Biodiversity of Socotra Archipelago,"). They differ from this proposal in that they were primarily concerned with collecting scientific information and, in the case of GEF, with zoning and planning. However, GEF also established the EPA EE Section that will play a central role in this project. The project will add value to the previous projects by converting scientific outputs into educational materials and by working with and training the EPA EE / MoE teams in their usage in

ways compatible with the unique local and Islamic context. It also brings added expertise to EPA and the mainstream MoE curriculum by merging UK and local knowledge. Co-operation and continuity with the previous projects is ensured by having key members of the previous projects (British and Yemeni) on the overall UK/Yemen/Socotra team.

RSPB (which is leading the UK EE team) and BirdLife are currently planning a *Learning for Sustainable Living (LFSL) in the Middle East (ME)* project in partnership with MoE, which will result in the concept and principles of EE for sustainable development being established in the MoE curricula. LFSL project will produce 'generic' Arabic teaching materials for schools in several countries, linked to given ME environmental priorities. This will result in education for sustainable development and EE becoming more established in the Yemeni education system. The DI project will perfectly complement LFSL by focusing on the Socotra local context and issues as a case study, providing the local context for many of the concepts that will be in LFSL materials. The regional materials will be focussed mainly on wider generic issues.

**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 (see Annex C for list and worked example) and rank the relevance of the project to these by indicating percentages. 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 project primarily addresses Yemen's CBD contractual requirements under clause 'a' of Article 13, 'public education and awareness'. Thus it promotes and encourages the conservation of biodiversity through educational programmes, with special reference to Socotra. It will achieve this in part by facilitating clause 'b'; working with international (UK and UNDP) organisations to develop these educational programmes (100% of project activity). Every opportunity will also be taken (when in discussion with EPA and MoE for example) to encourage educational decision-makers to view the work on Socotra as a model for wider replication in other parts of Yemen, especially where there is concern about the sustainable use of biodiversity. EPA, a partner in this project, is the CBD focal point in Yemen.

**12. How does the work meet a clearly identifiable biodiversity need or priority defined by the host country? Please indicate how this work will fit in with National Biodiversity Strategies or Environmental Action Plans, if applicable.**

GoY recognises the international importance of Socotra in all relevant policies and programmes in recent years, notably as the top conservation priority in the Yemen Country Study on Biological Diversity and in the National Biodiversity Strategy and Action Plan (NBSAP) published by the Ministry of Water and Environment and endorsed by GoY. NBSAP considers Socotra as an ideal ecosystem, as a top priority for sustainable development and biodiversity conservation and as a cornerstone in Yemen's first National Protected Area Management System. In July 2003 the archipelago was declared as the only UNESCO Man and Biosphere Reserve in the country, and one of only two in the Arab Region. The project helps to implement the two main planning instruments for Socotra: (a) The Socotra Archipelago's Conservation Zoning Plan (CZP) (GoY Decree 275 of Sep 2000); and (b) The Socotra Archipelago Master Plan (SAMP).

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

The project will assist MoE and EPA to mainstream biodiversity protection in the education curricula. It will foster long-term community support for sustainable use of natural resources through the continuation of traditional practices and implement the Conservation Zoning Plan. Informed people will support policies and regulations aimed at improving and sustaining local livelihoods and the overall conservation and development process. This will be coherent with GoY ongoing and planned policies and strategies.

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

MoE and EPA will maintain and promote the work long-term and so ensure: long-lasting use, additional post-project teaching materials, curriculum enrichment and community awareness

raising. The outputs (nb tailored education and awareness material) will be disseminated to all 37 Socotri schools, their 240 teachers and the 45 EPA extension officers and education team. All the islands' pupils will be reached and capacity of local staff of MoE and EPA significantly strengthened. The results will also be promoted to MoE's and EPA's senior decision-makers to develop an education system leading to wider support for EPA by informed citizens. Key personnel within MoE and EPA will be involved in the development and implementation of the project throughout. They will also be exposed to successful implementation of EE initiatives in Jordan and establish links with corresponding personnel in this country, which is a leader in the region. Schools will be encouraged to develop projects about the biodiversity of Socotra. The outputs of these projects will be disseminated to parents, local communities, media, and decision-makers. The work of the schools will be a means to celebrate the uniqueness of the island's biodiversity. Children can be powerful and persuasive communicators for biodiversity.

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

The legacy, on Socotra, will be a growing number of young adults who are aware (in livelihood and world conservation terms) of the value of protecting biodiversity and who have the confidence and the will to enter the debate on productive conservation versus destructive exploitation, whose conclusions will determine the extent and use of biodiversity on Socotra and the success of nature-based tourism on the islands. Success of this educational programme in Socotra will have positive spin-offs in other parts of Yemen and, because of Socotra's increasing renown, in other parts of the world. It is expected that the techniques and tools developed during the project will become embedded in the education system for the islands' schools. The materials will be relevant and customised for use in Socotra, therefore they should have a motivating impact on teachers and children. A *Socotra Nature Week* will be canvassed as a focal point for other activities and projects to celebrate the unique biodiversity of the island.

**16. Please give details of a clear exit strategy and state what steps have been taken to identify and address potential problems in achieving impact and legacy.**

The key requirement for achieving wider potential impact and legacy is for MoE and EPA to work together and with those donors promoting educational reform in Yemen (including the World Bank and DFID) to develop relevant EEal programmes and assign them a sufficiently high priority. This is already being addressed by high level discussions between SCDP and MoE and by linking the field project closely to the GoY-UNDP SCDP through the SCDP Coordination Unit in Sanaa, which will be in continual discussion with and disseminate information to MoE/ EPA and other relevant stakeholders at central and governorate level. At field level, the project will significantly raise the professional capacity of trainees (EPA EE team and key MoE staff). Because of their relevant prior experience, and their involvement at all stages of this project, the local EPA EE team is expected to be fully capable of continuing to use and disseminate the key outputs of this project in the post-project period. Once the first set of educational materials is jointly developed and produced by local and UK teams, and these have been tested and are in use locally by the EPA team, DI direct input in this sector will be completed and no further involvement required.

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

All the project's EE outputs will bear the Darwin logo together with SCDP, SCF, FoS, UNDP. Also, by being involved in the wider UN programme (SCDP), the Darwin logo may be included on a number of other publications, films and materials to which DI did not have direct input, but through providing a collateral contribution giving added value.

**18. Will the project include training and development? Please indicate who the trainees will be and criteria for selection and that the level and content of training will be. 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 focus is on training, providing appropriate class and field materials and methods on sustainable use and conservation of the bio-heritage. Trainees will include: EPA EE team (6 core staff and 37 EE officers); An initial 20 of the best teachers on Socotra (selected by MoA/EPA); All other (c.220) teachers will then be trained by the EPA team and the MoE trainees in the final and post-project phase. Training courses approx. 1 week (2 per trainee), in the EPA Socotra premises. Also the c.10 3-day workshops will be held at the EPA premises for the 220 teachers. Also the project will involve the TTC in discussions through; will provide a training course for its staff in year 2; will monitor progress in years 2 and 3 and will take a batch of student teachers for in-school training in year 3. The training on Socotra will involve analysis of the curriculum links for EE, environmental teaching methodology, use of the project's materials, development of biodiversity activities, development of biodiversity education projects, environmental games and interactive learning, evaluation. The training will be led by RSPB experts (assisted by other UK project staff) from the UK and a representative from the Yemen BirdLife Partner. Outcomes will be measured by analysis of the implementation of project materials and activities. For example, the percentage of schools participating. Observation, by the UK experts, of teaching and use of the materials will be done in some schools. Senior staff from the Yemen MoE, EPA and TTC will also undergo capacity building in Jordan, facilitated by the Jordan MoE and the Royal Society for the Conservation of Nature (RSCN), which has a lot of experience in implementing regional training. They will be exposed to how EE is implemented in the Jordanian curriculum and school system and by RSCN in their nature reserves, community projects and school wildlife clubs. Post-project, EPA will continue special presentations / events in schools across the island. This will also involve; (a) incorporation of environmental materials in the curriculum, (b) improvement in pupils' understanding of key issues, and (c) teachers' and MoE managers understanding and continued interest in the programme. The knowledge and skills of teachers and children will be tested through their exams. Teachers will continue to train more children. MoE / EPA will create formal timetable space and exam recognition of the work. The project, through the local offices of EPA, SCDP and MoE, will test-deliver courses to selected schools/children in order to obtain on-going feedback that will inform the teachers and TTC to improve teacher training. Delivering changes in attitudes requires children to be inspired by the wildlife and environment around them. This project will thus provide knowledge in an enjoyable and memorable context, in ways which celebrate their environment and stimulate their sense of care and concern for it. Training will explore ways of involving parents, so that traditional know-how is incorporated into the learning process and indigenous practices are acknowledged and respected.

**LOGICAL FRAMEWORK**

**19. 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
<b>Goal:</b>			
To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but poor in resources to achieve			
<ul style="list-style-type: none"> <li>• the conservation of biological diversity,</li> <li>• the sustainable use of its components, and</li> <li>• the fair and equitable sharing of benefits arising out of the utilisation of genetic resources</li> </ul>			
<b>Purpose</b> To create, through curricular education, future generations of people on Socotra knowledgeable about and concerned for the	<u>During the project:</u> the training modules being used to train teachers and the teaching modules being used in the schools in Socotra.	School records  Participatory evaluations with teachers and children.  Periodic participatory	The Ministry of Education supported by other central decision-making bodies (nb EPA) expands the project concepts and practices and reapplies them more

sustainable management of their islands' unique natural heritage of flora and fauna	<u>Post-project</u> : Growing numbers of school-leavers positively influenced by what they learned in school.	evaluations, with adults taught using the teaching modules	widely in Yemen.
<p><b>Outputs</b></p> <p>1: Materials / approaches developed with EPA EE team, TTC and pr'y and sec'y teachers on Socotra.</p> <p>2: Outreach strategies and courses developed, EPA staff and in-service teachers trained.</p> <p>3: Teaching strategy and courses for TTC developed.</p> <p>4: Agreements on EE between EPA (Socotra) and TTC and MoE achieved.</p>	<p>1: Materials and handbook to inspire nature exploration and conservation, drafted, tested by teachers and in use.</p> <p>2: Strategies &amp; courses produced; 1 person with UK training; 220 teachers trained; 43 EPA staff trained.</p> <p>3: Course manual(s); First group of TTC students being trained.</p> <p>4: Agreements and indications of their implementation.</p>	<p>1: Copies of the texts.</p> <p>2: Copies of the strategy and courses; copies of training manuals; UK certificate; EPA records.</p> <p>3: Copy of the manual(s); EPA and TTC records.</p> <p>4: Written agreements between EPA, TTC and MoE promoting EE on Socotra; EPA records</p>	<p>Additional teacher training and teaching materials are produced post-project.</p> <p>The Ministry of Education and EPA maintain and promote this conservation and environmental element of the curricula long-term in Socotra.</p>
<p><b>Activities</b></p> <p>1. Select data from experts and EPA team; devise and test educational materials/approaches with in-service teachers.</p> <p>2. Work with EPA to develop outreach strategies and courses and train EPA staff for in-service teacher training.</p> <p>3. With EPA/SCDP work with TTC to share skills and develop a teaching strategy and courses for TTC students.</p> <p>4. Discussions to reach long-term agreement between EPA/SCDP and MoE and TTC.</p>	<p><b>Activity Milestones (Summary of Project Implementation Timetable)</b></p> <p><u>1</u>: Pre-project &amp; Yr 1: Agreements reached on educational topics and materials selected. Yr 1: Materials drafted, translated, approved. Yr 2: More materials and approaches developed. Yr 3: EPA EE team and teachers using the materials/activities mentored.</p> <p><u>2</u>: Yr 1: Strategies and courses developed for field testing. Yr 1-2: Selected EPA staff trained in developing materials with teachers. Outreach strategy outside of curriculum developed. Yr 2: Accredited training in UK for 1 EPA or MoE staff member from Socotra achieved. Yr 2-3: Working with EPA staff and teachers, the new course developed and being delivered. Yr 2: 20 in-service teachers trained. Yr 3: All 220 in-service teachers trained. By yr 3: All 43 EPA Socotra staff trained and active.</p> <p><u>3</u>: Yr 1: Teaching strategy and courses developed. Yr 2: Courses approved and TTC staff trained. Yr 3: 1<sup>st</sup> group of TTC students being trained.</p> <p><u>4</u>: Yr 1-3: On-going meetings/discussions/emails, faxes with MoE, EPA, SCDP and other bodies in Sana'a resulting in EE being integrated into the curriculum, as initiated in Socotra.</p>		

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

<b>Project implementation timetable</b>		
<b>Date</b>	<b>Financial year</b>	<b>Key milestones</b>
	Apr-Mar 2005/6 Apr-Mar 2006/7 Apr-Mar 2007/8 Apr-Mar 2008/9	
Apr-Dec05	05/06	Devise and agree Memoranda of Understanding with all primary stakeholders, including detailed TOR for all UK experts and host country teams involved.
Jul-Dec05	05/06	Meetings held with all partners to discuss appropriate formats Educational topics agreed and basic formats selected EPA staff trained in facilitation techniques to trial materials Work modes with TTC agreed via MoE, EPA and SCDP Meetings with MoE re curricular connections and relevance Agreement re trialing on Socotra
Jan-Jun06	05/06	Meetings with teachers and TTC to trial materials Main materials drafted, translated, trialed and agreed
Sep06	06/07	Materials produced and delivered to Socotra before start of academic year Selected teachers trained in use of materials EPA staff trained in promotion of materials to teachers TTC staff trained
Sep06-Mr07	06/07	Work with MoE, EPA to promote EE in curriculum through core subjects using materials as exemplars Materials trialed in schools on Socotra; and exploring ways of involving parents in the process Topics for additional materials researched
Mar-Jun07	06/07	EPA and EE team and teachers using activities / materials Main materials refined in light of experience and changes agreed Training of additional teachers in use of materials by EPA staff
Jn07-Mr08	07/08	Additional materials drafted, translated, tested and agreed on basis of initial work and feedback from teachers using them Drafting of materials for non-curricular education (content and format) All Socotran teachers trained in delivery Agreement of non-curricular materials Training of all EPA staff in outreach use of materials (curricular and non-curricular) Preparation of Teachers' Manual for use in training teachers in colleges and in service
Sep07	07/08	Materials printed for school year 2006/7 Materials distributed to all schools by EPA staff and teachers given final instruction by them in its use
Sp07-Mr08	07/08	Teacher training 'courses' delivered to trainee teachers at TTC
Apr-Jun08	08/09	Discussions with EPA, MoE re expansion of the programme to other regions of Yemen
Jun08	08/09	EE in the curriculum and initiated in all Socotra schools.

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

<b>PROJECT OUTPUTS</b>		
<b>Year/Month</b>	<b>Standard output number (see standard output list)</b>	<b>Description (include numbers of people involved, publications produced, days/weeks etc.)</b>
Sep 06	1	The raw materials for the handbook to inspire nature exploration and conservation will come from many recent researchers including Morris, Miller, Christie, Dutton, Wranik, Milroy, Taleb, Porter. The text for the handbook will be agreed between them, EPA and SCDP/SCF and, through them, MoE, TTC and the teachers.
Sep 06	2	Building the appropriate training materials will depend on combined inputs from RSPB (education), EPA (education), Aridlands, other UK team members and the local experience/expertise of SCDP staff and the teachers too.
Jun 07	3	The course manual, in addition to the above, will involve the college staff and a Yemeni printing company (quotes from 2-3 good ones). The manual will be in use for academic year, 2006-07 which will allow for 20 teachers to be trained in that year
June 07	4	SCF, SCDP and EPA will have crucial roles, in discussion with MoE, World Bank (which is taking a lead in education) and other stakeholders in Sana'a and Socotra, to ensure that biodiversity conservation is given a higher priority in the basic curriculum in general, with Socotra being used as a test ground for including this in the curriculum because of Socotra's unique needs and because it is a contained entity.
June 07	5	SCF and SCDP, together with Aridlands, BirdLife/RSPB, and all Yemeni, UK and other contributors who spend time on Socotra, will work with the local EPA staff, joining them also in in-house teacher training and in selected school visits, to build a dedicated expert training unit. During the project this unit will facilitate links with the local MoE and with individual schools. Post-project, the unit will take the lead in ensuring that the work is sustained. Ways of delivering EE to both children and their parents will be explored, where possible using the parents as a resource and inspiration.

**MONITORING AND EVALUATION**

**22. Describe, referring to the Indicators in the Logical Framework, how the progress of the project will be monitored and evaluated, including towards delivery of its outputs and in terms of achieving its overall purpose. This should be during the lifetime of the project and at its conclusion. Please include information on how host country partners will be included in the monitoring and evaluation.**

Given that the purpose is to create future generations of people on Socotra aware and concerned about the sustainable management of their biodiversity, the project is providing the educational materials and approaches, the initial group of trained teachers, local short and long term support via EPA on Socotra and governmental underpinning by helping to create a formal recognition for the work within MoE. In-project monitoring will be via copies of the selected teaching materials and course manual, college records and EPA records and activity reports. Evaluation will involve annual and final participatory assessments by representatives of all stakeholder groups: MoE and EPA (Sana'a and Socotra); the colleges, teachers and school children. Likely post-project impact will be gauged by stated MoE and EPA formal commitment and by external and participatory evaluation of EPA's Socotra teaching unit.



