



Submit by Monday 30 January 2012

**DARWIN INITIATIVE APPLICATION FOR UK OVERSEAS TERRITORIES CHALLENGE FUND:
Round 18**

Please read the Guidance Notes before completing this form.

1. Name, postal address and contact details of applicant organisation and main individual: (notification of results will be by email to this individual)	
Professor Graeme Hays Department of Biosciences, College of Sciences Swansea University, Swansea, SA2 8PP	
E-mail address: _____	Phone: _____
2. Working title/name of the proposed resulting Darwin project (not exceeding 10 words):	
Sea turtles in the British Indian Ocean Territory (BIOT)	
3. Proposed UKOT(s) involved	Other collaborating country/ies to be involved
British Indian Ocean Territory (BIOT)	n/a

4. Principals in Challenge Fund work

(a) Please give the details of the main individuals who will be directly involved in the Challenge Fund award. Please copy the table if you require more space. CVs must be enclosed (max 1 page each).

Details	Main individual	2nd individual
Surname	Hays	Esteban
Forename(s)	Graeme	Nicole
Post held	Professor of Marine Biology	PhD student of Prof Hays
Department	Biosciences, Swansea University	Biosciences, Swansea University
Telephone		
Email		

(b) Partners relevant to the Challenge Fund award. Please provide details below, plus letters of support. (These letters should express intention to collaborate, contribution to the Challenge Fund activity, endorsement of the proposed partnership, and the expected contribution of the proposed resultant Darwin project to the conservation of the biodiversity of the relevant UKOT(s)).

Details	Main project partner	Other partners
Organisation	Foreign & Commonwealth Office	Marine Resources Assessment Group (MRAG) Ltd
Function/ Purpose of Organisation	Help with logistics of working at BIOT. Help with turning outcomes of our work into conservation policy.	Fisheries licensing in BIOT Turtle track data collection by Fisheries Officers
Name of Main Contact	John McManus	John Pearce
Post Held	BIOT Administrator	Principal Consultant

5. Concept note for the Challenge Fund award (max 500 words). This question concentrates on what the current application is for and should demonstrate the objectives of the award including

- **what work will be carried out under the award;**
- **the location and duration of this work;**
- **what you expect to achieve from receiving the Challenge Fund award;**
- **details of how you will monitor and evaluate the work (reporting requirements for this fund are in the process of being finalised).**

Sea turtles are a flagship group for the BIOT Marine Protected Area. Some excellent studies on the biology of sea turtles at BIOT have been undertaken by Dr Jeanne Mortimer, an internationally renowned sea turtle expert based in the USA and Seychelles. These studies have shown that two species, green turtles and hawksbill turtles, occur in appreciable numbers at BIOT. Jeanne has ongoing turtle work at BIOT involving nest monitoring at Chagos and analysis of DNA and stable isotope samples. Professor Hays has been appointed to the BIOT Science Advisory Group, which has been set up by the Foreign and Commonwealth Office (FCO) to advise the Overseas Territories Directorate (OTD) of the FCO on the development and implementation of an appropriate scientific programme for BIOT. Together Hays & Mortimer have identified several important knowledge gaps that Swansea expertise is perfectly placed to fill. This application is to kick-start the use of Swansea expertise to drive forward sea turtle conservation work that has been identified for BIOT.

We request funds for the two people mainly involved in this work, Hays and Esteban, to visit BIOT. Hays is the PI and Esteban (currently PhD student with Hays) will be the named research assistant on the full Darwin application that we will develop from this work. We will visit BIOT to assess the feasibility of conducted targeted sea turtle work. We will meet with personnel at the US Base to assess how local residents could best be involved and be involved in full Darwin applications. We will also meet with personnel from MRAG (Marine Resources Assessment Group Ltd) who conduct fisheries licensing and monitoring in the BIOT MPA on behalf of the FCO. We will (1) explore the potential for using MRAG Senior Fisheries Protection Officers on board licensed fishing vessels for conducting surveys on sea turtle nesting populations across the wider archipelago which is much less accessible than the island of Diego Garcia where the US base is located; (2) assess the practicability of measuring hatchling success and incubation conditions using in situ data loggers; (3) assess the potential for using biotelemetry to assess the movements of turtles; (4) assess the potential for measuring operational sex ratios for the breeding populations and (5) investigate the potential to train local residents to be involved in this work. We are well placed to complete all these aspects of the work, with a combined 30 years experience (Hays/Esteban) in these areas.

We will monitor and evaluate our work by Hays feeding back updates to the BIOT SAG during their regular meetings at the FCO. We have successfully completed a previous Darwin grant at Ascension Island (grant reference 7006, 1998-2002). Professor Brendan Godley (Darwin Expert Committee 2009-2012) was employed as an early career post-doc on that Darwin award and will confirm our ability to manage Darwin grants that produce lasting conservation benefits.

6. Concept note for resultant project (max 500 words). This question concentrates on the full Darwin application you intend to submit after the Challenge Fund award and should demonstrate:

- **Expected purpose and outputs of the resultant Darwin project**
- **How the resultant Darwin project would meet a need (and how this need was defined) in the UKOTs and help the territory/ies in its implementation of any or all of the following Conventions: the Convention on Biological Diversity (CBD)/Convention on Migratory Species (CMS)/Convention on International Trade in Endangered Species (CITES).**
- **Brief evidence of the proposed partners' intentions to collaborate in the Challenge Fund award and an outline of their expected role in the resultant Darwin project: include brief details of contact to date and planned ongoing collaboration. This would normally be supported by a letter or email of support, which may present the majority of this evidence.**
- **The expected role of the UKOTs and other UK expertise in the resultant Darwin project**

Within a full Darwin proposal we would collect field data for several years on incubations conditions, patterns of movement, population sizes on the outer islands and operational sex ratios for sea turtle populations at BIOT. This will underpin continued assessment of the size of the populations over future years and decades (see contribution of the UKOT below). Such long-term monitoring is needed for sea turtle populations as there is often marked inter-annual variability at rookeries.

The data collected on important life-history parameters will help identify threats to the sustainability of sea turtle populations: hatchling success (survival in nests); incubation temperatures (which influence hatchling success as well as hatchling sex ratios, since turtles exhibit temperature dependent sex determination); long-distance movements and hence threats from mortality outside the BIOT MPA; operational sex ratio, i.e. ratio of adult males to females on the breeding grounds (there is concern that climate warming may induce highly skewed sex ratios, impacting population viability). We would build up an on-site capacity with both personnel at the US Base and implement improved turtle assessments on the outer islands as part of the role of fisheries monitoring officers on board fishing vessels (MRAG). Through this capacity building the UKOT will have a clear role and as part of our exit strategy will leave a legacy of on-site trained personnel to maintain sea turtle conservation work at the end of a full Darwin grant.

This project would enable the UK to meet national obligations arising from several Conventions relevant to turtles, in particular the CBD (provision of monitoring data for the CBD database), CMS (establishment of geographical range of species of turtles) and CITES (endorsing listing of turtle species on CITES lists). Nicole Esteban has worked with MRAG in the past and has discussed involvement of MRAG staff on the resultant Darwin project. We will also work closely with the BIOT Administrator, John McManus, and the BIOT SAG. See letters of support. Hays sits on the BIOT SAG (2011-2014).

7. Justification of need for a Challenge Fund award. Please provide details of why alternative funding is not available from within your own organisation or from other sources. Will matched funding be provided? (max 250 words)

Research within the College of Science at Swansea University is primarily supported by externally funded projects. Staff can work on their projects where an element of their salary is costed (e.g. as buy-out for their time or within overheads awarded as part of a grant). This application to the Challenge Fund will allow Prof. Hays to work on this project. We estimate that over 1 year this project will involve 25 days work for Prof Hays. We have costed in for 15 days work with the remaining 10 days provided as matched funding by Swansea University. In addition Nicole Esteban, a Ph.D student with Professor Hays, will spend 15 days working on this project and it is anticipated that she will be the named research assistant in a full Darwin application.

This matched funding has been agreed with Professor Rory Wilson, Acting Head of Biosciences

8. Costs. Provide a detailed breakdown of costs to be funded by the Darwin Initiative.

Budget Line	Year 1	Year 2
Please complete those appropriate to your application – they may not all be relevant	Apr 2012 – Mar 2013	Apr 2013 – Mar 2014
Travel costs (travel for 2 people to BIOT via Singapore) (airfares, sea travel, visas, travel documents)		
Subsistence costs (2 people, 20 days each @ £90 per day) (specify by individual and number of days)		
Overhead costs (including office costs)		
Operating costs (including conference/workshop/fieldwork costs)		
Capital costs 2 Fastloc/GPS tags for tracking trials @ £3100 per unit, inc Argos charges) (please specify)		
Other: Consultancy (please specify)		
Other (please specify)		
Salaries (specify by individual) 15 days for professor Graeme Hays		
Total per year	£ 24,985	£
TOTAL REQUESTED FROM DARWIN INITIATIVE	£ 24,985	

9. Provide anticipated dates of award activity (including start and finish dates) and any milestones where relevant.

Date	Key Milestone
1 April 2012	Project start
April-October 2012	Planning fieldtrip, ordering equipment, Skype meeting between project personnel
Nov 2012	Visit to BIOT
Dec 2012-March 2013	Assessment of results from fieldtrip, Skype meeting with personnel on BIOT, Meeting with MRAG in London, development of plan for full Darwin application
Throughout	Updates of results by Hays to BIOT SAG.
31 March 2013	FINISH

10. In what year would you expect to submit the full Darwin project application?

Round 20
Delete as applicable

I certify that, to the best of our knowledge and belief, the statements made in this application are true and the information provided is correct.

Name (block capitals): Professor Graeme Hays

Position in organisation: Professor of Marine Biology

Signed:



Dated: 25 January 2012

Project title: Sea turtles in the British Indian Ocean Territory (BIOT)

Challenge Fund Application - Checklist for submission

	Check
Have you provided anticipated start and end dates for your award?	Yes
Are both your concept notes within 500 words each?	Yes
Has your application been signed	Yes
Have you read the Guidance Notes and are you satisfied that your concept would be eligible for a main project application?	Yes
Have you included CVs and letters of support as required?	Yes
Have you checked the Darwin website immediately prior to submission to ensure there are no late updates?	Yes

Once you have answered Yes to the questions above, please submit the application in Word format, not later than 2359h GMT on Monday 30 January 2012 to Darwin-Applications@ltsi.co.uk using the title of the project (or first few words) as the subject of your email.

Please also send a hard copy of the signature page (only) to the Darwin Applications Unit, LTS International, Pentlands Science Park, Bush Loan, Penicuik EH26 0PL.

Applicants from UKOT institutions should fax a copy of the signature page to the Darwin Applications Unit on 0131 440 5501 or email a scanned original signature to Darwin-applications@ltsi.co.uk.

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