

Darwin Initiative – Final Report

(To be completed with reference to the Reporting Guidance Notes for Project Leaders
(<http://darwin.defra.gov.uk/resources/reporting/>) -

it is expected that this report will be a **maximum** of 20 pages in length, excluding annexes)

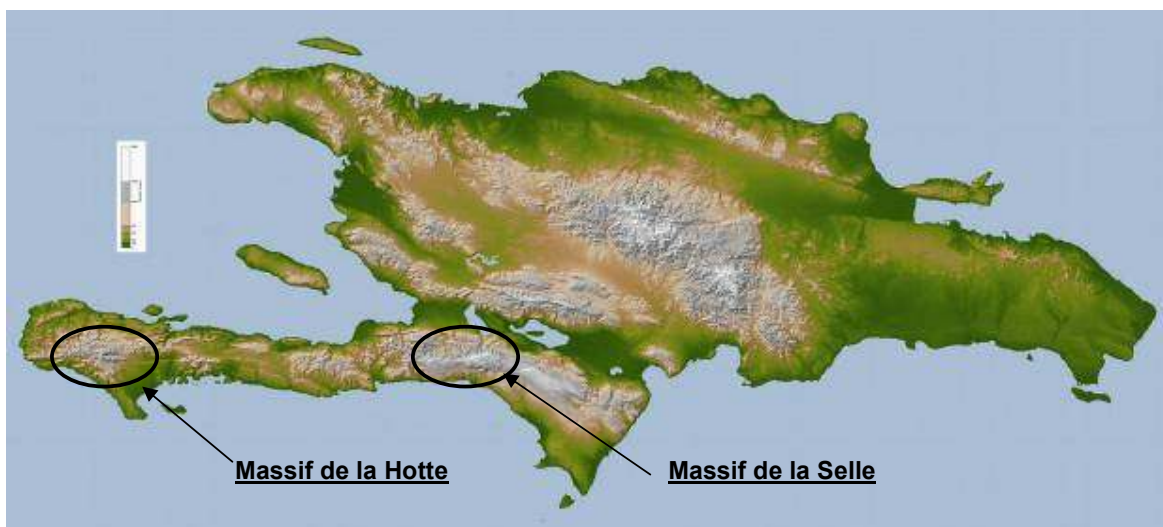
Darwin project information

Project Reference	18-011
Project Title	Building a future for Haiti's unique vertebrates
Host Country	Haiti
UK Contract Holder Institution	BirdLife International
UK Partner Institution(s)	Zoological Society London, Durrell Wildlife Conservation Trust
Host Country Partner Institution(s)	Société Audubon Haiti
Darwin Grant Value	£XXX
Start/End dates of Project	1 April 2010 – 31 March 2013
Project Leader Name	David Wege
Project Website	http://www.birdlife.org/haiti-threatened-vertebrates/
Report Author(s) and date	David Wege, Sam Turvey, Rich Young, Joel Timyan, Arnaud Dupuy. 1 July 2013.

1 Project Background

This project aimed to “Improve the conservation management and status of Haiti’s globally threatened vertebrates and the integrity of the forest habitats they depend upon, within the key biodiversity area of the Massif de la Hotte” (see Fig 1). Minute areas of highly threatened forest remain, but to ensure that their unique biodiversity has a future, this project has drawn on UK biodiversity expertise to successfully build institutional capacity and strengthen critical skills in Haiti through experiential learning focused on field research, project planning, monitoring and management. Knowledge of Haiti’s threatened vertebrates has been significantly enhanced and important discoveries made.

Fig 1: Darwin primary project area, Massif de la Hotte, and secondary project area, Massif de la Selle, southern Haiti



2 Project support to the Convention on Biological Diversity (CBD)

The Haitian government has not finalised a formal National Biodiversity Strategy and Action Plan (NBSAP). A 1998 draft exists (<http://www.cbd.int/doc/world/ht/ht-nbsap-01-en.pdf>), and a draft First National Report was submitted, also in 1998, since when no documents have been published. However, the draft NBSAP outlined a number of critical areas that this Darwin project has contributed towards the delivery of, such as:

- Institute a more coherent National System of Protected Areas (SNAP) including a management policy for protected areas and the creation of the National Protected Areas Agency (ANAP).
- Establish a more efficient surveillance system to ensure that the SNAP is protected from encroachment of any kind including sustainable security.
- Special recovery measures targeting rare, threatened or vulnerable faunal and floral species.

The in-country partner (SAH) has maintained a close relationship with Haiti's three CBD focal points and Ministers of Environment that have been in office during the course of this project. Jean Vilmond Hilaire (SAH's past Executive Director) led the work (in collaboration with the Ministry of the Environment) to develop the National System of Protected Areas, ensuring that priorities and monitoring from Darwin project field research have been built into the national system plan and communicated directly to the Ministry of Environment. Jean Vilmond Hilaire also held the post of Minister of Environment (and CBD focal point) during the course of this project which allowed for further consolidation of project outputs being incorporated into the development of national plans. A national biodiversity database is under development by ANAP with the assistance of the national centre for GIS (CNIGS). SAH has been working closely with both agencies to ensure species data from this Darwin project are integrated into this nationally-driven initiative. However, at the present time, due to lack of an open, web-based database system, SAH serves as the *de facto* source in Haiti for individuals and organizations requesting threatened species data.

3 Project Partnerships

BirdLife has worked closely with Société Audubon Haïti (SAH) for the duration of the project. The relationship has embraced a number of other projects, thus communication with SAH is on a "more than weekly" basis, primarily by email, but also by skype. SAH has developed significantly during the last year of the Darwin project. It was without an Executive Director for a significant period during the middle of the project, and then hired Joel Timyan as an interim Executive Director to cover the position until Arnaud Dupuy finished his work with UNDP-Haiti before starting as permanent Executive Director in April 2012. Jean Vilmond Hilaire (previous Executive Director) moved over to lead the development of the National System Plan for Protected Areas (in close collaboration with this project), before becoming the Minister of the Environment (a position that he held for just 6 months before a ministerial reshuffle). SAH now employ two field staff which quickly helped advance the delayed fieldwork component of this project in the final 12-18 months. SAH established a permanent office at the Université Quisqueya for the last year of the project which has had concrete benefits in terms of collaboration with the university.

BirdLife has been the pro-active lead for this project, working in close collaboration with the UK partners ZSL and Durrell. Communication with the UK institutions was done through regular email and phone calls, and then quarterly face-to-face meetings to review project progress. Durrell has facilitated the critical mapping aspects of the project, and also led on a comprehensive training program for SAH field staff. ZSL led on the biodiversity informatics. SAH has taken full responsibility for in-country logistics and implementation/ execution on the ground. Their work is supported by the UK partners.

BirdLife has been the primary liaison between the UK institutions and the Haitian partner (SAH), with all parties copied on email correspondence as appropriate. Durrell's thematic role in coordinating the training aspects of the project (field training) led them to develop bi-lateral

communications with SAH, although again – all parties are copied on correspondence as appropriate. Both ZSL and Durrell are new project partners for the BirdLife Caribbean Program. The partnership has developed well during the project – communication has been regular and open, and new project collaborations are being discussed as a result. The idea of a formal steering or project committee was dropped as the informal but open structure utilised by the project served it well, with collaborators included in communications as appropriate.

Other collaborations

A range of highly productive collaborations have been developed during this project.

The Darwin project (17-025) “Building evidence and capacity to conserve Hispaniola’s endemic land mammals”, led by Durrell, has been particularly helpful to the work in Haiti. The in-country project manager has provided training in mammal surveys during the May 2011 project coordination field trip, and facilitated intensive training on mammals at the Dominican project site. The mammal survey protocols developed in the Dominican Republic were built into the design of fieldwork in Haiti (and have been used in the training provided).

The Darwin project (15-033) “Monitoring Bat Biodiversity: Indicators of Sustainable Development in Eastern Europe”, led by Institute of Zoology (IoZ), developed a bat monitoring protocol and technology (www.ibats.org.uk/: Tranquillity detectors) that were used in the field to evaluate – for the first time – the bat fauna of the Massif de la Hotte. The results have been analysed by an intern at ZSL/ IoZ.

In order to deliver on the project’s mapping needs Durrell worked closely with the GIS department at the University of Bath, and also with ex-University of Bath lecturer, Mark McConnell, now at the institution Ecological Research and Training. These have been productive relationships for the project, with the forest maps produced for the first time for the Massif de la Hotte (that are of great interest to a number of other collaborators).

Blair Hedges at Penn State University (USA: www.hedgeslab.org/) is the foremost expert on Haiti’s amphibians, and has been very supportive of this Darwin project. The project has provided support to (and piggy-backed onto) a number of his expeditions into remote areas of the Massif de la Hotte, resulting in numerous amphibian discoveries and video footage that has been used in the three video essays to be found on www.caribnature.org/). Blair Hedges’ extensive records of threatened amphibians in the Massif de la Hotte, dating back to the 1980s have been databased and geo-referenced (with support from this project) ready for mapping onto the forest maps for the region.

The local partner – SAH – is working in close collaboration with CNIGS (national GIS lab), the national system of protected areas (NSPA), and the Université Quisqueya. These collaborations have been have delivered a number of key outputs for the Darwin project, and will be maintained into the future. Formal MOUs are under development but seem to take an incredibly long time in Haiti.

4 Project Achievements

4.1 Impact: achievement of positive impact on biodiversity, sustainable use or equitable sharing of biodiversity benefits

At the level of the project Sub-Goal “*Conservation status of Haiti’s globally threatened vertebrates and their habitats significantly improved*” there has been tangible progress towards this, and the foundations have been put in place to ensure that this is indeed achieved as a result (in part) of this project. The Measureable Indicators for this sub-goal have not been fully achieved, primarily due to delays in government progress on the development of the protected areas agency (ANAP), the national system for protected areas (SNAP) and the completion of the NBSAP. However, as outlined below the Monitoring and Conservation Programs MCPs) will be the focus of ANAP’s new strategy for work within the Massif de la Hotte and Massif de la Selle. Also, engagement is in place for project outputs to be built into and influence the ANAP

strategy and the NBSAP when they are finally completed. The project has also strongly influenced the development of the SNAP, so the project has influenced the future protection of these critical forest areas. The project has had a positive impact (which will continue into the future) on the Ministry of Environment, the national protected area system, the awareness of government staff, the capacity of NGO staff, knowledge and awareness of university students and local community members. These all provide a stronger foundation on which the project goal will be achieved in the future.

4.2 Outcomes: achievement of the project purpose and outcomes

At the level of the project purpose "*Improve the conservation management and status of Haiti's globally threatened vertebrates, and the integrity of the forest habitats they depend upon, within the key biodiversity area of the Massif*" there has been tangible progress towards this, but it has not been achieved. The Measureable Indicators of achievement for the project Purpose were over ambitious considering that this project started just 2 months after one of the world's most devastating earthquakes had hit the nation's capital. The Monitoring and Conservation Programs were not completed, but will be the focus of the protected areas agency's (ANAP's) new strategy for work within the Massif de la Hotte and Massif de la Selle. Post-earthquake government instability has resulted in the slow development of the ANAP, and the NBSAP has not been completed. However, the engagement is in place for project outputs to be built into and influence the ANAP strategy and the NBSAP when they are finally completed. The project has also strongly influenced the development of the national system of protected areas (the SNAP) in terms of protected area definition and zoning for the Massif de la Hotte and Massif de la Selle (taking into account the distributions and needs of the threatened vertebrates), so while the rate of loss of habitats has not been halted or reduced, the project has exerted as much influence as it could have to further the protection of these critical forest areas. Close collaboration with the ANAP and Ministry of Environment (MDE) in terms of information sharing and expert advice is a significant Outcome of this project. The training of staff and students, and raising awareness national and amongst the local communities within the Massif de la Hotte is also a major Outcome.

4.3 Outputs (and activities)

The January 2010 earthquake killed c.250,000 people and devastated Port-au-Prince and the Haitian government. This came just 2 months before the start of this project. As a result, many anticipated Output and Activities were not feasible, or took much longer than anticipated. It also created a very different backdrop to undertaking field research and influencing government in terms of biodiversity conservation. The project's achievements must be considered in this context. Some things were not achieved, but many others – following strong principles of adaptive management – were. Many new outputs were achieved too – partly in response to other activities being impossible, and partly in response to the changed local socio-political environment that the project found itself functioning within.

Outputs

1. Evidence-base on distribution, population status, ecology and conservation requirements of globally threatened vertebrates and their habitats strengthened and disseminated

Output achievement: 65%

This output was achieved in part, and there is significant additional work to do to analyse occupancy and habitat data, and to prepare relevant scientific and other technical documents. However, the baseline from which this Output aimed to "strengthen and disseminate" was found to be significantly lower than originally anticipated. The result in terms of this project was that all biological data collected in the field and collated in databases was essentially being gathered together for the first time, and there was significantly more work than anticipated to pull these data together. This was most certainly the case for habitat mapping. There were no habitat maps in existence for Haiti (which was an unforeseen problem). A number of avenues (such as Landsat 7 imagery analysis) were tested but were found to be inadequate. Analysis of orthophotos did eventually result in a forest map for Haiti, but this was too late in the project to allow for sophisticated mapping for the threatened species using predictive modelling for their potential distributions. The process of data collection (and associated field work), collation,

mapping, databasing has provided excellent opportunity for on the job training for the SAH staff involved. These staff are well positioned and trained to make good use of the data to further build our understanding of the conservation requirements of Haiti's threatened species. A huge body of vitally important baseline work and training has been achieved by the project under this Output.

2. Strengthened Haitian capacity (at local community, local and national levels) for conserving and monitoring globally threatened vertebrates and their habitats

Output achievement: 85%

This output was largely achieved as set against the Measureable Indicators. The main area that has yet to be completed is the national biodiversity database. The fact that high level discussions were taking place within the government concerning the development of a national biodiversity database meant that database development effort was diverted and invested in liaising with the government to ensure that data from this project are integrated into this nationally driven initiative. The development of Monitoring and Conservation Programs for the globally threatened species did not happen (due to delays associated with Output 1), but close collaboration with the protected areas agency (ANAP) has ensured that these species programs will be the focus of ANAP's new strategy for work within the Massif de la Hotte and Massif de la Selle. Government instability throughout this project has however meant that the ANAP has developed slowly, and the NBSAP has not been completed (Haiti's NBSAP exists only as a "profile"). However, the engagement is in place for project outputs to be built into and influence the ANAP strategy and the NBSAP when they are finally completed.

3. Skills in conservation biology, planning, advocacy and management are strengthened in local partner organisations and more widely in Haiti

Output achievement: 85%

This output was largely achieved as set against the Measureable Indicators. Two areas were not achieved. Efforts to establish formal collaboration with the Université Quisqueya postgrad program were unsuccessful. However, the national project partner (SAH) established their office at the university and informal exchanges with students are on a daily basis, and formal training has been provided to 20 students (on GIS analysis) and student interns have participated in field expeditions. This "organic" approach to engaging students has been successful and is continuing, and may still lead to a formal partnership through the Academic Council of the University with the Environmental Masters Program. The EDGE Fellows program run by ZSL evolved into something that this project could not utilise during the project lifetime. However, Haitian field staff were able to attend Island Species-Led Action (ISLA) training in the Dominican Republic, with one of them also attending the 3-month DESMAN training (facilitated by Durrell) in Jersey. Informal training exchanges were also established between this project and the Darwin Initiative project (Durrell and ZSL) in the Dominican Republic. A number of ad hoc training opportunities were able to be taken full advantage of because of this project, and the result is a significantly improved skills base amongst the young conservationists working with SAH in Haiti. The training has not advanced far enough for these conservationists to be writing scientific papers, but the production of field reports and on-going mentorship are aimed at developing this important skill.

4. Awareness of status and conservation needs of globally threatened Haitian vertebrates substantially improved at local, national and international level

Output achievement: 90%

This output was almost entirely achieved as set against the Measureable Indicators. Some areas went further than the Measureable Indicators (for example, 40,000 calendars have been distributed rather than 5,000; a Haiti Biodiversity Expo of 20 posters was produced and two informational films have been made). However, some areas have not been fully achieved. The informational films have not been broadcast on TV yet, and it has not been possible to evaluate any tangible increase in awareness. The survey of attitudes to threatened mammals proved to be a useful tool, but showed that the threatened mammals were not a major concern for local residents. Recognising this, a broader socio-economic survey has been developed and will be

used in the same areas to determine attitudes and understanding of conservation issues in general. The project's approach to awareness-raising has responded to the unique cultural environment and followed the advice provided by the national partner. SAH has used a broad range of interventions to get the message out at the local and national level. This is now an on-going effort with project outputs being used and disseminated on a weekly basis.

4.4 Project standard measures and publications

See Annexes 4 and 5 below.

4.5 Technical and Scientific achievements and co-operation

Biological data for the Massif de la Hotte (and Massif de la Selle) were scarce and not held in one place prior to this project. The project collated baseline data for all globally threatened (IUCN Red Listed) vertebrates, and undertook targeted field expeditions to gather data from new localities, and scientifically robust data from previously visited sites.

No forest cover map existed for Haiti prior to this project. A GIS with all available coverages for southern Haiti has now been collated. Defining forest cover using 2010 orthophoto data is completed for Massif de la Hotte Key Biodiversity Area (KBA) by scientists at Durrell and Ecological Research and Training. The mapped forest remnants were used to target field expeditions using randomly sited survey points within these forest patches (following a survey designed employed by the Durrell-led Darwin project in Dominican Republic) – many of which had never been visited by scientists before. A field monitoring manual (including protocols for each taxonomic group) was completed and was used as reference for the biological surveys in the Massif de la Hotte and Massif de la Selle KBAs.

Twelve expeditions were conducted between November 2011 and March 2013. Six of these expeditions were conducted in collaboration with Pennsylvania State University (Blair Hedges), Philadelphia Zoo (Carlos Martinez-Rivera), Conservation International (Robin Moore) and IUCN – building a solid base of international co-operation that is continuing through new expeditions funded by CEPF, IDB-GEF and UNEP. This on-going work is very much based on scientific research catalysed by the Darwin Initiative. A set of mission reports have been written that summarize SAH activities funded under the Darwin Initiative for the 2011-2013 period. These reports have been archived on the SAH website (<http://audubonhaiti.org>).

As a direct result of these Darwin expeditions, over 12 new amphibian and reptile species are in current stages of being described.

Most of the threatened vertebrate taxa known to occur in these KBAs were surveyed during the expeditions and data is available that confirm their status and distributions. A preliminary analysis of bat echolocation recordings has been completed for a selection of bat recordings from new locations in Massif de la Hotte and Massif de la Selle. All data for the 12 expeditions (and historical data) of southern Haiti has been entered in an Excel spreadsheet and is available for further analyses and mapping. This extensive dataset represents the most current and exhaustive vertebrate database for both Massif de la Hotte and Massif de la Selle KBAs.

Using these species data, selected forest remnants are now being mapped using threatened vertebrate species indices in order to prioritise remnants for immediate conservation action. This prioritisation could not be completed within the term of this Darwin project, but is continuing, and along with a range of other geospatial products based on data collated under this project, will support the process of developing management plans by the national agency for protected areas (ANAP), and is thus assisting the government of Haiti in national park management.

An MOU between SAH and the Ministry of Environment (ANAP) awaits formal signatures but is none-the-less being implemented and serves as a model for other government agencies charged with protected area management, primarily the IDB-GEF funded project and the UNEP-funded Côte Sud Initiative – both operating in the Massif de la Hotte KBA.

SAH participates as the lead organisation on various *ad hoc* national committees in relation to the Massif de la Hotte, scientific surveys within it, and the long-term conservation of it. SAH has been requested to take the lead in the IDB-GEF project to make available its scientific database for protected area management in the Massif de la Hotte and to facilitate the coordination of continuing and future scientific investigations. ANAP is currently assessing its management needs for the Massif de la Hotte National Park, including a park management plan, which will incorporate Darwin project outputs, particularly the distribution of threatened vertebrate species in the Massif de la Hotte, and the prioritised forest remnants.

4.6 Capacity building

Société Audubon Haïti (SAH) has grown dramatically during the course of the Darwin project, both in terms of human resources and the skills-base of the staff. Significant training and mentorship opportunities have been provided for by the Darwin project (and have utilised training opportunities with the Durrell-led Darwin project in the Dominican Republic), and these have been capitalised on as part of a parallel institutional capacity-building project focusing on SAH that BirdLife has administered (funded by the MacArthur Foundation) during the life-time of this Darwin project.

Two Haitian project staff were hired by SAH early in Year-2 and their performance was appraised in Year-3. Feedback has been sought from each of the training events (see below) that these staff attended, and the feedback has been unreservedly positive. These field staff benefitted from practical field techniques, project design and equipment training (from Durrell, ZSL and BirdLife staff) during the May 2011 field trip. This training was built on through an intensive 10-day training visit to Durrell's Darwin project site in the Dominican Republic. The two staff also attended Durrell's 1-week "Island Species-Led Action" (ISLA) training course in the Dominican Republic. They also received advanced mist netting and bird banding skills training in Feb 2013 under the direction of Vermont Center for Ecostudies. One of the two field staff members attended and completed the 3-month DESMAN training course in Jersey.

SAH staff (especially the field staff, but other staff as well) have benefitted from the development of a robust mentorship system throughout the project. There has been (and will continue to be) close collaboration on training opportunities, mentorship, strategic support to SAH, and field expeditions between ZSL, Durrell, Bath University, BirdLife, Conservation International, Penn State University, Vermont Center for Ecostudies and Philadelphia Zoo. Key individuals from these institutions communicate actively over a range of projects executed by SAH and provide coherent support and field training to SAH staff and activities. Individuals from this network form part of a mentorship system that has delivered skills transfer benefits throughout the 3-year period of the Darwin Initiative. This system is working well and the SAH staff are now themselves mentoring students and faculty of Université Quisqueya. Future mentorships will include other universities as research and conservation continue in the Massif de la Hotte and Massif de la Selle KBAs.

The capacity building project (MacArthur Foundation-funded) that has run in parallel to this Darwin project has provided for administrative support, core financial support to the Executive Director, securing an office at the Université Quisqueya, and the development of an institutional strategic plan.

Haiti has been a challenging country to work in (post-earthquake), but the financial support from Darwin (and MacArthur Foundation) and institutional support from our UK project partners (Durrell and ZSL) has allowed for some major advances to be achieved with SAH and for Haitian biodiversity conservation. The need for high levels of flexibility and adaptive project management provided experiential learning for the BirdLife project manager (David Wege). The project also enabled BirdLife to formally engage and collaborate with ZSL and Durrell for the first time in the Americas, and these relationships will be maintained and consolidate through future collaborative projects and programs.

4.7 Sustainability and Legacy

Collaboration with multiple international NGOs to help achieve the project outputs and more importantly sustain the impacts long-term continues to be a major project output. These collaborations and partnerships are described in Section 3 (Project Partnerships), and they demonstrate the interest in the focus that this Darwin project has and our success in promoting this. The convergence of interests between international NGOs active in Haiti is proving critical to long-term sustainability, and the maintenance/ development of local capacity. BirdLife managed to secure funds in October 2010 from the MacArthur Foundation for institutional capacity building of SAH. This, combined with support from the US Forest Service (March 2011) is helping to build a strong institutional foundation (e.g. through strategic planning) to ensure sustainability. BirdLife is working with SAH to develop into a strong partner, but we would aim to scale back our direct support or field activities as soon as they were taking this on directly with donors.

At the institutional level, the capacity building outlined in 4.6 above will ensure that SAH continues to develop institutionally based on a solid foundation of skills, a core group of engaged staff and in the knowledge that they have the support of a wide range of international NGOs. SAH have secured funds from CEPF, IDB-GEF and UNEP, and BirdLife continues to work with SAH on institutional capacity building through our grant with the MacArthur Foundation. Their financial sustainability appears to be quite healthy at this point in time.

Fieldwork will continue through SAH's collaborations built with Pennsylvania State University, Vermont Center for Ecostudies and indeed BirdLife's Partner in the Dominican Republic – Grupo Jaragua. Project achievements in terms of scientific data, mapping, and prioritisation of forests have all been embedded into the developing national system of protected areas (SNAP), and as the national protected areas agency develops plans for the national parks in the two southern Haiti massifs, these data will be informing those management decisions. The databases and GIS are also embedded within the Ministry of Environment and the national centre for GIS (CNGIS) and there is huge support for and reliance on SAH's data for a wide range of biodiversity conservation and management purposes that will ensure it endures.

BirdLife has already had high-level meetings with Durrell to discuss future collaborations in the Caribbean, and we will seek to do likewise with ZSL in the coming months. The international NGOs that are working with SAH and providing training and mentorship to SAH staff are maintaining contact on an occasional basis over issues such as habitat mapping, further mammalian surveys, herptile issues and bird surveys (especially for the globally threatened Bicknell's Thrush and Black-capped Petrel).

5 Lessons learned, dissemination and communication

Lessons learned

- New staff (i.e. the two field staff in Haiti) take time to come up-to-speed and function at maximum efficiency.
- The absence of an in-country project manager (in this case the Executive Director) for a significant period of the project made project implementation extremely difficult, putting the emphasis on remote management from the UK.
- Residential training initiatives (e.g. the 3-month DESMAN training) remove capacity from the national project team (in this case one of the two field staff) which can have a significant impact on field survey output during the period of training.
- The evolving institutional/ political landscape in Haiti has made for a dynamic situation for project management. Rapidly developing initiatives emerging from post-earthquake Haiti mean that a number of project outputs have not been achieved, others have over achieved, and some have needed to be altered or refined in the face of rapidly changing external factors. For example, the momentum behind the development of a national biodiversity database clearly made this output redundant in terms of an output created through the Darwin project. However, the government-led initiative is one which the project has strongly

supported through the provision and management of existing data, and in the long-term this will help secure its long-term viability.

- Adaptive project management in Haiti is still critical to keep projects moving forward. Darwin Initiative staff have been both understanding and flexible to this need.
- Taking a long-term, sustainable view is the only viable approach to project development in Haiti. Slower progress is a sacrifice worth making if it allows for the generation of buy-in and ownership “in-country”.
- An assumption was made that forest maps were available (or easily generated). This proved a false assumption that affected many aspects of project progress including the timing and targeting of field work. The destruction of the National Centre for GIS (CNIGS) during the earthquake had unforeseen implications in this regard, and generating primary forest maps from available images proved exceptionally difficult.

Dissemination and Communication

Project outputs and achievements have been applied and disseminated in a highly targeted fashion within Haiti (and to a certain extent within North America), and these dissemination efforts are continuing (and indeed increasing). The primary target audience has been the government agencies and programs (primarily the Ministry of Environment, National Protected Areas Agency, and National Centre for GIS), the universities (through interested and engaged students) and national NGOs (especially those with a strategic focus on the Massif de la Hotte – such as Fondation Macaya, and Massif de la Selle – such as Fondation Seguin). SAH has been a leading institution within the development of the Rezo-Ekolo network of (13) Haitian conservation NGOs, and the Darwin Initiative project has featured regularly within the network’s planning meetings. SAH has also actively participated with the developing national system of protected areas (SNAP), feeding information and priorities from the Darwin project into that process.

BirdLife’s project funding relationship with a number of key donors in Haiti (including MacArthur Foundation, US Forest Service and the Critical Ecosystem Partnership Fund) means that these donors have been fully aware of the Darwin project and the outputs it has delivered. The same is true of the international Black-capped Petrel Working Group, and the Bicknell’s Thrush Conservation Working Group – both key species that attract much international interest and both of which are present (and have been recorded) during Darwin project field expeditions. The project was profiled to a large international audience (over 200 individuals) at the biennial Society for the Conservation and Study of Caribbean Birds conference in Grand Bahama, July 2011. A scientific project poster was produced and was on display for the whole conference.

Dissemination is continuing, and will continue as the data from this project are analysed further and presented in different ways for different purposes in-country and to international NGO and donor stakeholders.

5.1 Darwin identity

The Darwin Initiative has been publicised throughout this project, with the logo included on some widely distributed products (see below), and Darwin Initiative materials being made available both within Haiti and at an international meeting. Initially this project was recognised as a distinct “Darwin” project, but increasingly through the 3-years of the project, other projects dovetailed with it until it was best described as a program or which the Darwin-funded project was a significant part. The catalytic effect that the Darwin project has had for scientific discovery and biodiversity conservation within the southern massifs of Haiti is something that BirdLife will certainly continue to celebrate and promote at every opportunity.

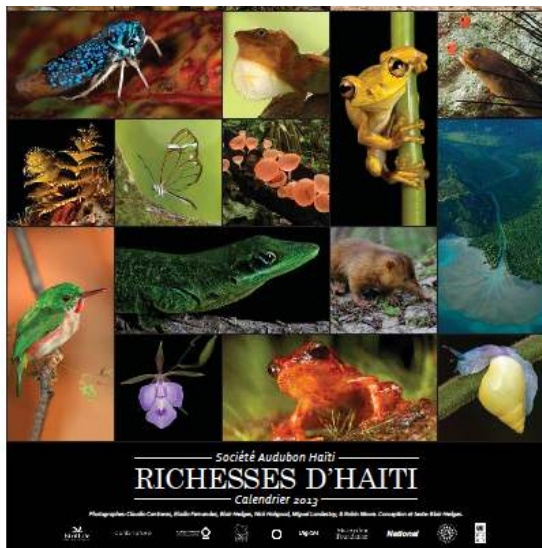
Specific high-profile outputs that have used the Darwin Initiative logo are highlighted below.

The Haiti Biodiversity Expo, featuring 20 posters was designed to showcase Haiti’s native habitats and its flora and fauna. This Expo was exhibited at the Université Quisqueya and was attended by over 600 people during the Dec. 5 – Jan 12, 2013 period (including the Minister of Environment at a launch event). It received broad press coverage with several live radio interviews and taped video broadcast on local radio and TV stations. The exhibit has been designed to last several years and be mobile for use in other municipalities.

Fig 2: Haiti Biodiversity Expo in situ at Université Quisqueya, and Darwin Initiative acknowledgement.



Fig 3: Cover of the Haiti Biodiversity calendar 2013



The “Haiti Biodiversity” 2013 calendar was printed and distributed to sponsors, major donors (UNDP, UNEP, UNESCO, USAID, GIZ, CADI, AFD), government agencies and administrations, the private network of schools in Haiti’s Key Biodiversity Areas, the Haitian media, and the network of conservation organizations in Haiti and the Dominican Republic. A total of 40,000 calendars were printed and distributed.

Two Video essays: “Saving Haiti’s Frogs” (which was shown during the Darwin Initiative 20 years celebration event), and “Haiti’s Grande Coline” are available at www.caribnature.org. They detail the plight of the forests in Haiti and the unique amphibians the forests support. These video were produced with video supported by

this Darwin project, taken on expeditions supported by this project. They have not yet been used on Haitian TV or at local meetings, but will be used in the media later this year. The Darwin Initiative and BirdLife are acknowledged at the end of these videos.

Fig 4: Project poster displayed at the 2011 SCSCB meeting.



The project was profiled in Year-1 to a large international audience (over 200 individuals) at the biennial Society for the Conservation and Study of Caribbean Birds conference in Grand Bahama, July 2011. A scientific project poster was produced and was on display for the whole conference.

A number of web articles have been produced (internationally), and the SAH website (<http://audubonhaiti.org>) has undergone a re-design to feature the Darwin project, and Darwin project outputs. National Haitian media has broadcast through interviews and video special events such as the Haiti Biodiversity Expo (Dec 12–Jan 13) and the Ministry of Agriculture conference on the conservation of the Black-capped Petrel and Ricord’s Iguana (March 2013). A profile is

available through the Eco-Index website.

6 Monitoring and evaluation

The planned Monitoring Activities in the original project design had the following indicators:

- Indicator 1: Establish Project Implementation Team and report on progress against the Measurable Indicators and individual institutional workplans.

The Project Implementation Team has functioned well in the UK (BirdLife/ ZSL/ Durrell), and increasingly well in Haiti. However, the absence of an Executive Director at SAH proved problematic for the early stages of the project, although as the field staff started in Year-2, this lack of capacity was somewhat ameliorated. By the end of Year-2 the Project Implementation Team had become more dynamic as the Haitian staff settled in, and this continued through to the end of the project.

- Indicator 2: Undertake 6-monthly formal project evaluations to feed into the 6-month and annual (end of year) reports to Darwin.

Formal evaluations were undertaken against the logframe and proposed activities. This was done on a 3-monthly basis and led to a number of “adaptive management” decisions to address emerging issues (primarily in Haiti). No major changes to the project design were made, but a series of smaller changes and adaptations were made. In this aspect, the logframe – unless managed as a dynamic document – is not the most flexible approach for project monitoring and management decision-making, but in all other respects it provides an elegant tool.

- Indicator 3: Assess increased skills/capacity of in-country conservationists/host-country project staff on a regular basis.

The increase in skills and capacity (resulting from training courses) was not formally evaluated although feedback from those running the training was sought and was invariably positive. Also, the output from the trained staff improved in quantity and technical complexity quite markedly through the lifetime of this project, with field staff drafting field reports and other documents where they had previously never done such reporting or data recording.

- Indicator 4: Assess attitudinal change towards threatened vertebrates and habitat conservation in local communities.

Attitudes towards threatened vertebrates and conservation were assessed, but the assessment of *change in attitude* was not possible to demonstrate within the life-time of the project.

The Measureable Indicators at the level of the Project Purpose were not realistic, and were not achieved, but most aspects of the Outputs were achieved and thus significant progress (under challenging conditions) has been made. This project in Haiti – immediately post-earthquake – was not best suited to a strict logframe approach to project management, monitoring and reporting. The logframe was helpful in maintaining focus, but adaptive management decisions needed to be made across many aspects of the project from day one. It was not possible to put in place baseline assessments against which to monitor in many instances, and indicators (and their means of verification) did change during the project term. However, for a country in a state of emergency, I’m not sure there is a better method of managing and monitoring a project than through a logframe – what has been important has been the flexibility demonstrated by the Darwin Initiative to the circumstances that the Project Implementation Team faced throughout the project term.

6.1 Actions taken in response to annual report reviews

No comments were made on the annual reports.

7 Finance and administration

7.1 Project expenditure

Project expenditure during the reporting period (DEFRA Financial Year, 1 April 2012 to 31 March 2013)

Item	Funds carried forward 2010/11	Budget 2012/13	Expenditure March 2011- April 2013	Variance	Comments (please explain any variance)
Rent, rates, heating, overheads etc		XXX	XXX	£ -500	Exchange rate issues – between sterling, US dollars and Haitian Gourds.
Office costs (eg postage, telephone, stationery) Operating costs	XXX	XXX	XXX	£7.07	N/A
Travel and subsistence	XXX	XXX	XXX		Less travel (trips to Haiti) required than originally budgeted.
Printing					N/A
Conferences, seminars, etc					N/A
Others (specify)					N/A
Salaries (specify by individual)	XXX	XXX	XXX	£-1.631.91	Additional Admin required due to location and complexities of working in Haiti
TOTAL	XXX	XXX	XXX	-30.54	

April 2012- March 2013

Staff employed (Provide name and position)	Work period	Proportion of time spent on project	Cost (£)
David Wege (BirdLife) - Project Leader	01/04/12-31/03/13	20%	
Veronica Anadon (BirdLife) - Technical coordinator	01/04/12-31/03/13	15%	
Amiro Perez-Leroux (BirdLife) - Senior Hispaniola Advisor	01/04/12-31/03/13	7.5%	
Amanda Tapia (BirdLife) - Administrator	01/04/12-31/03/13	7.5%	
Samuel Turvey (ZSL) - Assistant Project Leader	01/04/12-31/03/13	25%	
Ian Stephens (ZSL) - Herpetology research coordinator	01/04/12-31/03/13	10%	
Richard Young (Durrell) - Biodiversity Assessments	01/04/12-31/03/13	7.5%	
Mark O'Connell (Durrell) - Senior Herpetologist	01/04/12-31/03/13	7.5%	
Jean Vilmond Hilaire (SAH) - Haiti Project leader	01/04/12-31/03/13	25%	
Ose Pauleus (SAH) - Field Coordinator	01/04/12-31/03/13	50%	
Abdel Abellard (SAH) - Field	01/04/12-31/03/13	50%	

Coordinator			
Anderson Jean (SAH) - Field Assistant	01/04/12-31/03/13	50%	3,657.08
Enold Anderson (SAH) - Technical Assistant	01/04/12-31/03/13	50%	657.08

7.2 Additional funds or in-kind contributions secured

As a direct result of this Darwin Initiative project – using Darwin funds as leverage or match – BirdLife has directly secured the following grants to build a comprehensive program of work (implemented by SAH) around the biodiversity and conservation of Haiti’s southern massifs.

These grants are:

- *Post-earthquake environment support for the Haitian NGO sector. Critical Ecosystem Partnership Fund (CEPF)*, US\$251,354. October 2012 – January 2013.
- *Building a long-term future for Haitian biodiversity: institutional strengthening of a leading national NGO. MacArthur Foundation*, US\$250,110. October 2010 – September 2013
- *Building a foundation for bird conservation in Haiti’s montane forests. US Forest Service International Programs*, US\$ 59,995. July 2012 – May 2013.

Société Audubon Haiti have themselves raised funds to continue the work that the Darwin Initiative project has catalysed, although most of these funds were due to come online after the Darwin Initiative project ended in March.

7.3 Value of DI funding

The value of the Darwin Initiative funding is perhaps best quantified through the additional funds that it has had a direct influence on BirdLife securing for work in the same areas with our national Partner. These additional funds are detailed above (7.2) and total over US\$560,000.

Perhaps more significant though in terms of long-term sustainability of this critical program of science-based biodiversity conservation work, are the collaborations and partnerships established through this project. These partnerships include in-country partnerships established through the Rezo-Ekolo network of NGOs; partnerships with NGOs local to the project sites (who are also Rezo-Ekolo members); partnerships with the universities (that will help to engage a new generation of biologists and conservationists); partnerships with the Ministry of Environment and the protected areas agency. It also includes international partnerships between both the host country partner (SAH) and international NGOs, and between the international NGOs themselves. The dialogue between these stakeholders – all with a common vision for biodiversity conservation in southern Haiti – is perhaps the most important legacy of this Darwin Initiative project, and certainly justifies the Darwin investment.

Annex 1 Report of progress and achievements against final project logframe for the life of the project

Project summary	Measurable Indicators	Progress and Achievements Final 2013.
<p>Goal: <i>To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but constrained in resources to achieve</i></p> <p><i>The conservation of biological diversity,</i></p> <p><i>The sustainable use of its components, and</i></p> <p><i>The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources</i></p>		<p>The project has drawn extensively on a wealth of UK expertise, both technical and practical, in order to advance biodiversity conservation within Haiti's southern massifs. These advances are detailed below, but importantly include the establishment (for the first time) of a solid foundation of scientific data on which to determine priorities, and also a robust collaborative network of national and international NGO (and government) stakeholders that will ensure that the goal of sustainable use and conservation of biodiversity is ultimately achieved.</p>
<p>Purpose</p> <p>Improve the conservation management and status of Haiti's globally threatened vertebrates, and the integrity of the forest habitats they depend upon, within the key biodiversity area of the Massif</p>	<p>MCPs for globally threatened vertebrates implemented and producing monitoring data • Rate of loss of critical habitat for globally threatened vertebrates reduced/ halted • State, Pressure, Response variables gathered each year for the massif and its globally threatened vertebrates • MCPs for globally threatened vertebrates built into Haitian National Biodiversity Strategy – Year 3</p>	<p>The project purpose (as defined by the measurable indicators) has not been achieved, but most aspects of the Outputs have been achieved and thus significant progress (under challenging conditions) has been made. Tangible advances against the project purpose are in train through the various government mechanisms being developed for the conservation of Haiti's southern massifs – advances that can be directly attributed to this project.</p>
<p>Output 1. Evidence-base on distribution, population status, ecology and conservation requirements of globally threatened vertebrates and their habitats strengthened and disseminated</p>	<p>Scientifically robust baseline data for globally threatened vertebrates collated, analysed and reported – Year 1 • Baseline occupancy survey completed and GIS built and populated with data as part of a Haitian biodiversity database and clearing-house – Year 2 • Habitat suitability models, key conservation zone maps, and long-term species/ habitat resiliency plans produced – Year 2 • Long-term monitoring protocols and survey design developed and</p>	<ul style="list-style-type: none"> • Baseline data has been collated for all globally threatened vertebrates. All data for 12 expeditions (Nov 2011 – Mar 2013) of southern Haiti entered in Excel spreadsheet and ready for further analyses and mapping. • Mapping of selected forest remnants begun using threatened vertebrate species indices and Google Earth. Mapping prioritized by mammal, amphibians, birds and reptiles. • Biological data, including habitat analyses, developed to be imported as dbase for attribute tables of GIS. SAH biological field staff have conducted 1 week introductory training of geospatial analyses to advance on conservation GIS efforts. Forest mapping using 2010 orthophotos completed to support the analysis of vertebrate taxa distributions, present data and start the process of developing conservation plans. • Databases of the vertebrate locality records have been collated. Development of national biodiversity database hampered by slow

<p>guidelines drafted – Year 2 • National MCP steering committee established • Draft MCPs for globally threatened vertebrates published, and implementation started.</p>	<p>implementation of ANAP/SNAP and changes in Ministry of Environment due new Minister (January 2013). The MOU between SAH and MDE (ANAP) awaits formal signatures but is being implemented and serves as a model for other government agencies charged with protected area management, primarily the GEF-funded IDB project and the UNEP-funded Côte Sud Initiative – both operating in the Massif de la Hotte KBA.</p> <ul style="list-style-type: none"> • A Monitoring Manual based on the Field Survey Manual has not been completed for the major taxonomic groups. This manual would be used by field teams associated with SAH, MDE and other environmental groups in Haiti to assess population trends in targeted areas of Haiti, particularly the KBAs and IBAs. • SAH participates as the lead organisation on various <i>ad hoc</i> committees in relation to the Massif de la Hotte, scientific surveys within it, and the long-term conservation of it. SAH has been requested to take the lead in the BID/GEF project to make available its scientific database for protected area management in the Massif de la Hotte and to facilitate the coordination of continuing and future scientific investigations. SNAP is currently assessing its management needs (April 2013), including a park management plan, that will incorporate Darwin outputs, particularly the distribution of threatened vertebrate species in the Massif de la Hotte and its associated maps.
<p>Activity 1.1 Collect baseline data at target field sites</p>	<ul style="list-style-type: none"> • Twelve biological expeditions were conducted between Nov 2011 and Mar 2013. Six of these expeditions were conducted in collaboration with Pennsylvania State University, Philadelphia Zoo, Conservation International and IUCN. New expeditions are to continue under additional funding sources (CEPF, IDB, UNEP) based on scientific research catalyzed by the Darwin Initiative. Over 12 new amphibian and reptile species are in current stages of being described. The extensive database is the most current and exhaustive vertebrate database for both Massif de la Hotte and Massif de la Selle KBAs where the 2 national parks are located. The field surveys targeted remaining natural forests of southern Haiti, many which had never been explored by scientists. Most of the threatened vertebrate taxa known to occur in these KBAs were surveyed and data is available to confirm their status and distributions. A preliminary analysis of bat echolocation recordings has been completed for a selection of bat recordings that represent locations in Massif de la Hotte and Massif de la Selle.
<p>Activity 1.2. Build GIS and populate with data</p>	<ul style="list-style-type: none"> • A GIS with all available coverages for southern Haiti has been developed (in the UK). Defining forest cover using 2010 orthophoto data is completed for Massif de la Hotte KBA by scientists at Durrell and Ecological Research and Training. Landsat imagery analysis of current forest cover will be conducted by Oregon State University with funding through CEPF beginning in 2013.
<p>Activity 1.3. Analyse occupancy and habitat data</p>	<ul style="list-style-type: none"> • Occupancy data is being developed for major threatened taxa groups (mammals, frogs, reptiles, birds) using Google Earth imagery. SAH field staff have completed 1 week of introductory GIS training with goal of developing

<p>Activity 1.4. Prepare scientific and other technical documents</p>	<p>geospatial products to assist government of Haiti in management of national parks.</p> <ul style="list-style-type: none"> A field monitoring manual (including protocols for each taxonomic group) was completed and used as reference for biological surveys in the Massif de la Hotte and Massif de la Selle KBAs. A set of mission reports have been written that summarize SAH activities funded under the Darwin Initiative for 2011-2013 period. These will be archived on the SAH website. Results of the Darwin Initiative has fed scientific news to a host of websites – BirdLife, American Bird Conservancy, USFWS, Philadelphia Zoo, Société Audubon Haiti, Grupo Jaragua (DR), Philadelphia Inquirer, CaribNature and several Haitian radio and television sites.
<p>Conservation and sustainable resource use agreements made between local communities and national project partners • Conservation networks of local community groups created • Local community members participate in project activities • Three participatory MCP Planning workshops held and documents published – Year 3 • Monitoring data collection protocols and experimental design developed and fully tested (and manuals written) • Cross-sectoral steering committee • Haitian biodiversity database and clearing-house established • National network of conservation practitioners and experts established – Year 2 • UK – Haiti mentoring system established</p> <p>Output 2. Strengthened Haitian capacity (at local community, local and national levels) for conserving and monitoring globally threatened vertebrates and their habitats</p>	<ul style="list-style-type: none"> Conservation and sustainable resource use agreements between local families and SAH have been established in the community of Formon. Local community groups have been formed in Duchity and Formon, with individuals committed to recording observations of mammals and engaged in research, education and conservation activities alongside SAH. Local community members have participated in each of the expeditions – either as assistants, guides or as “trainees” - and maintain communication with SAH regarding sightings and conservation issues relating to local population of endemic species (mammals, birds, amphibians, reptiles). Monitoring data collection protocols and experimental design have been developed for the field survey component of the project and are being tested. A manual has been drafted, and will be finalised once the protocols have been tested and refined as necessary. A framework for field survey reports has been developed and is in the process of being refined with the collation of reports for the field expeditions undertaken during Year-2. No formal steering committee has been established. However, there is a coherent “informal” network of senior individuals from a wide range of institutions active within Haiti who communicate on a regular basis. This is functioning as an informal steering committee. A national biodiversity database is under development by CNIGS (on behalf of the national system of protected areas). SAH is working closely with both CNIGS and the SNAP to ensure data from this project are integrated into this nationally driven initiative. SAH is one of the driving forces behind the establishment of the Rezo-Ekolo network of environmental NGOs in Haiti. The consolidation of this network has been the focus of a BirdLife administered project (using CEPF funding), thus the Darwin project has featured heavily within discussions and strategic planning. The mentorship of Haitian conservationists has developed strongly during Years 2 & 3, with formal training sessions for two key field staff and ongoing support to all SAH staff. This system is working well and has been extended to the students and faculty of Université Quisqueya. Future mentorships will

		include other universities as research and conservation continue in the Massif de la Hotte and Massif de la Selle KBAs.
Activity 2.1. Establish national biodiversity database and clearing-house		<ul style="list-style-type: none"> A national biodiversity database is under development by SNAP with the assistance of CNIGS (on behalf of the national system of protected areas). SAH is working closely with both agencies to ensure data from this project are integrated into this nationally driven initiative. However, due to lack of an open, web-based system, SAH serves as the de facto source in Haiti for individuals and organizations requesting species-based queries.
Activity 2.2. Develop steering committees, networks and mentorship systems		<ul style="list-style-type: none"> There is close collaboration on training opportunities, mentorship, strategic support to SAH, and field expeditions between ZSL, Durrell, Bath University, BirdLife, Conservation International, Penn State University, Vermont Center for Ecostudies, Philadelphia Zoo and EPIC. Key individuals from these institutions communicate actively over a range of projects executed by SAH and provide coherent support and field training to SAH staff and activities. Individuals from this network form part of a mentorship system that has delivered skills transfer benefits throughout the 3-year period of the Darwin Initiative.
Activity 2.3. Facilitate MCP Planning workshops and community participation		<ul style="list-style-type: none"> SAH participates with several government agencies as part of ad hoc working groups to develop action plans for protected area management. An April 2013 workshop on the feasibility and development of Conservation Accords with local communities was spearheaded by Conservation International with the assistance of SAH based on experience and data derived from the Darwin Initiative activities.
Activity 2.4. Produce best-practice, MCP and monitoring manuals		<ul style="list-style-type: none"> A field monitoring manual is under review by collaborating scientists active in Haiti. It is expected that the development of MCPs will be a focus of ANAP's new strategy to work closely with the communities that reside in biodiversity hotspots of the La Hotte and La Selle KBAs.
Activity 2.5. Ensure adoption of MCPs into Haiti's NBSAP		<ul style="list-style-type: none"> Due to the slow development of ANAP, the MCPs and NBSAP are in developing stages as the close of the Darwin Initiative activities.
<p>Output 3. Skills in conservation biology, planning, advocacy and management are strengthened in local partner organisations and more widely in Haiti</p>	<p>Collaboration with Université Quisqueya postgrad program established • 1 Haitian conservationist receives two-year fellowship on EDGE Fellows programme, including UK training course • Minimum of 20 Haitian conservationists attend the postgraduate course run in Haiti • 1 Haitian conservationist attends DESMAN course in Jersey • 20 students from the postgrad program participate in preparation of MCP</p>	<ul style="list-style-type: none"> One Haitian (SAH) conservationist has attended and completed the 3-month DESMAN training course in Jersey Two Haitian (SAH) conservationists attended the one-week ISLA training course in the Dominican Republic. Two Haitian (SAH) conservationists attended a 10-day informal training course on field techniques for surveying, monitoring and aping mammals at Durrell's Darwin project site in the Dominican Republic. Skills transfer has continued through mentorship and formal training. A new cadre of students at Université Quisqueya and Université Etat d'Haiti are being trained in biological survey methods and actively participate on a volunteer basis with SAH field staff in selected KBAs throughout the country. Two Haitian (SAH) conservationists are involved in drafting/ refining the monitoring manual and the field survey report framework.

	<p>documents • Counterpart project manager leads drafting of 1 article for peer-reviewed journal, and 1+ media articles • Haitian project manager plays key role in leading MCP workshops and drafting documents • Successful skills transfer/ responsibility</p>	<ul style="list-style-type: none"> • Formal collaboration with the Université Quisqueya postgrad program has not been established. However, SAH now has an office at the University and informal exchanges with students are on a daily basis. Formal training (in conjunction with the University, CNIGS and the SNAP) has been given to 20 students on the acquisition of geo-spatial data and GIS analysis. Student interns have participated in field expeditions and will continue to do so. • One SAH field staffer attended the 3-month DESMAN training course (accredited by the University of Kent). • Four young adults participated in and were trained during the field expedition to Duchity in March 2012. An additional 6 adults residing in the La Hotte KBA were trained by SAH senior staff in scientific research, education and conservation approaches targeting local community development (Cayes, July 2012). • Formal collaboration with the Université Quisqueya postgrad program has not been established. However, SAH now has an office at the University and informal exchanges with students are on a daily basis. Formal training (in conjunction with the University, CNIGS and the SNAP) has been given to 20 students on the acquisition of geo-spatial data and GIS analysis. Student interns have participated in field expeditions and will continue to do so. • SAH field project staff benefitted from practical field techniques, project design and equipment training (from Durrell, ZSL and BirdLife staff) during the May 2011 field trip. This training was built on through an intensive 10-day training visit to Durrell's Darwin project site in the Dominican Republic. The two field staff also attended Durrell's 1-week "Island Species-Led Action" (ISLA) training course in the Dom. Rep. 5 SAH staff and UNIQ students received advanced mist netting and bird banding skills in Feb 2013 under the direction of Vermont Center for Ecostudies. • Two Haitian project staff were hired early in Year-2 and their performance was appraised in Year-3. Feedback has been sought from each of the training events that these staff have attended, and the feedback has been unreservedly positive. • The "unique vertebrates" 2013 calendar was printed and distributed to sponsors, major donors (UNDP, UNEP, UNESCO, USAID, GIZ, CADI, AFD), government agencies and administrations, private network of schools in the KBAs, the Haitian media, and the network of conservation organizations in Haiti and the Dominican Republic. A total of 40,000 calendars were printed. • Two video essays have been produced that detail the plight of the forests in Haiti and the unique amphibians the forests support. These video essays are available on the web at CaribNature and were produced with video supported by the Darwin project, and on expeditions supported by this project. They have not yet been used on Haitian TV or at local meetings.
<p>Activity 3.1. Implement UK- and Haiti-based university training for local conservationists</p>		
<p>Activity 3.2. Ensure ongoing skills transfer for Haitian project staff</p>		
<p>Activity 3.3. Undertake regular performance appraisals of Haitian project staff</p>		
<p>Output 4. Awareness of status and conservation needs of globally threatened Haitian vertebrates substantially improved at local, national and international level</p>	<p>5,000 threatened vertebrate calendars and posters produced and distributed at meetings with local communities, and in local schools • 'Informational' film on Haitian vertebrate conservation (and its relevance to sustainable-use and livelihoods) produced and broadcast on Haitian television and at local community meetings/ schools • Survey</p>	

<p>of attitudes shows improved awareness and perception of globally threatened vertebrates in communities local to project field sites during the project (baseline Year 1 compared with Year 3)</p> <ul style="list-style-type: none"> • 6 national radio and TV interviews, 6 national and 1 international newspaper articles • 6 articles and regular blogs published on partner websites • Increasing number of “Haiti” hits on partner websites 	<ul style="list-style-type: none"> • Haiti Biodiversity Expo, featuring 20 posters designed to showcase Haiti’s native habitats and its flora and fauna. This Expo was exhibited at the Université Quisqueya and attended by over 600 persons during the Dec. 5 – Jan 12, 2013 period. It received broad press coverage with several live radio interviews and taped video broadcast on local radio and TV stations. The exhibit was designed to last several years and be mobile for use in other municipalities in forthcoming years. • The survey of attitudes has so far demonstrated what the pervasive attitudes are towards the threatened mammals and their habitats. Most residents are more concerned about controlling feral animals (cats, dogs) and rats than the endemic mammals and do not consider the hutia and solenodon as threats to their livelihoods. • A number of web articles have been produced (internationally), and the SAH website is undergoing a re-design to feature the Darwin project. National Haitian media has broadcast through interviews and video special events such as the Haiti Biodiversity Expo (Dec. 5 – Jan 12, 2013) and the Ministry of Agriculture conference on the conservation of the Black-capped Petrel and Ricord’s Iguana (March 25, 2013).
<p>Activity 4.1. Implement a programme of local and national awareness raising</p>	<ul style="list-style-type: none"> • Project field staff have engaged locals during field work to educate/ raise awareness of the biodiversity within their local environs, and explain the purpose of the field work. Field work results (and recommendations) have been shared with the Ministry of Agriculture and Ministry of Environment. The close working relationship with the SNAP, CNIGS and the University has also provided many opportunities to raise the awareness of individuals concerning particular species, vertebrates in general and the critical importance of the Massif de la Hotte for biodiversity conservation. • SAH has re-designed their webpage to feature several results of Darwin Initiative activities. The 2013 SAH calendar showcases much of the unique Haitian biodiversity that was photographed as a result of Darwin Initiative-funded research. • Environmental education presentations were made to local elementary teachers, students and a youth group in the Duchity area. Thirty students (7-11 years) and 26 teenagers interacted with SAH with native animal posters, live-handling of amphibians and reptiles and lessons in natural habitat requirements. An environmental education strategy was developed for 6 schools in the area of La Visite National Park resulting in a special environmental day organized by the school directors and their students (March, 2013).
<p>Activity 4.2. Implement a programme of international awareness raising</p>	<ul style="list-style-type: none"> • Two web articles published. A profile of the project is available through the Eco-Index website. • Video essays: “Saving Haiti’s Frogs” (which was shown during the Darwin Initiative 20 years celebration event), and “Haiti’s Grande Coline” are available at www.caribbeanature.org/. The Darwin Initiative and BirdLife are

<p>Activity 4.3. Survey attitudes towards threatened vertebrates and habitat in local communities</p>	<p>acknowledged at the end of these videos.</p> <ul style="list-style-type: none"> • A scientific project poster presented at the biennial Society for the Conservation and Study of Caribbean Birds conference in the Bahamas. • The “Awareness and perceptions of Hispaniola’s threatened vertebrates” questionnaire is being used to direct interviews with locals during each field trip. Mammal surveys/ questionnaires were conducted with Duchity area farmers to gather information on their knowledge and perspectives of the two terrestrial mammals. • A broader survey has been developed to study socio-economic, land occupancy and peasant perceptions of conservation issues along an altitudinal transect in the southern and western buffer zones of Macaya National Park.
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Annex 2 Project's final logframe, including criteria and indicators

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p>Goal: Effective contribution in support of the implementation of the objectives of the Convention on Biological Diversity (CBD), the Convention on Trade in Endangered Species (CITES), and the Convention on the Conservation of Migratory Species (CMS), as well as related targets set by countries rich in biodiversity but constrained in resources.</p> <p>Sub-Goal: Conservation status of Haiti's globally threatened vertebrates and their habitats significantly improved</p>	<p>Progress on implementing Monitoring and Conservation Programmes (MCPs) for all of Haiti's globally threatened vertebrates made within two years of End of Project • MCPs for globally threatened vertebrates built into Haitian National Biodiversity Strategy - Year 3 • Priority MCP activities incorporated into government and NGO annual workplans within two years of End of Project • National Steering committee established and overseeing implementation of all globally threatened vertebrate MCPs within two years of End of Project</p> <p>MCPs for globally threatened vertebrates implemented and producing monitoring data • Rate of loss of critical habitat for globally threatened vertebrates reduced/ halted • State, Pressure, Response variables gathered each year for the massif and its globally threatened vertebrates • MCPs for globally threatened vertebrates built into Haitian National Biodiversity Strategy – Year 3</p>	<p>• National Biodiversity Strategy monitoring reports</p>	
<p>Purpose Improve the conservation management and status of Haiti's globally threatened vertebrates, and the integrity of the forest habitats they depend upon, within the key biodiversity area of the Massif</p>	<p>Scientifically robust baseline data for globally threatened vertebrates collated, analysed and reported – Year 1 • Baseline occupancy survey completed and GIS built and populated with data as part of a Haitian biodiversity database and clearing-house – Year 2 • Habitat suitability models, key conservation zone maps, and long-term species/ habitat resiliency plans produced – Year 2 • Long-term monitoring protocols and survey design developed and guidelines drafted – Year 2 • National MCP steering committee established • Draft MCPs for globally threatened vertebrates published, and implementation started.</p> <p>Conservation and sustainable resource use agreements made between local communities and national project partners • Conservation networks of local community groups created • Local community members participate in project activities • Three participatory MCP Planning</p>	<p>MCP reports, database and GIS • Annual State, Pressure, Response reports for Massif de la Hotte and threatened vertebrates • Scientific literature • Government reports to CBD • National Biodiversity Strategy monitoring reports • Project progress reports</p>	<p>Close collaboration and communication between project partners • Haitian government support continues throughout project</p>
<p>Outputs 1. Evidence-base on distribution, population status, ecology and conservation requirements of globally threatened vertebrates and their habitats strengthened and disseminated</p>	<p>Conservation and sustainable resource use agreements made between local communities and national project partners • Conservation networks of local community groups created • Local community members participate in project activities • Three participatory MCP Planning</p>	<p>Project progress and annual reports, newsletters and partner websites • Scientific literature – project publications (minimum of 3 articles submitted to peer-reviewed journals and 4 articles in IUCN Specialist Group literature) • 3 MCPs, protocols and guidelines published/ on project partner websites • Long-term species/ habitat resiliency plan for massif • Steering Committee meeting minutes • Haitian biodiversity database and clearing-house</p> <p>NGO–Community agreements • Community network meeting reports • Government biodiversity strategy documents • Government and NGO annual workplans • Monitoring field</p>	<p>Haitian government continues to provide permits for field research</p>
<p>2. Strengthened Haitian capacity (at local community, local and national levels) for conserving and monitoring globally threatened vertebrates and their</p>	<p>Conservation and sustainable resource use agreements made between local communities and national project partners • Conservation networks of local community groups created • Local community members participate in project activities • Three participatory MCP Planning</p>	<p>Communities recognise livelihood – biodiversity link • Effective workshop facilitation • Stakeholders attend workshops • Govt</p>	

habitats	workshops held and documents published – Year 3 • Monitoring data collection protocols and experimental design developed and fully tested (and manuals written) • Cross-sectoral steering committee • Haitian biodiversity database and clearing-house established • National network of conservation practitioners and experts established – Year 2 • UK – Haiti mentoring system established	manuals available on project partner websites • Project annual reports • National network e-group traffic and new collaborations • Mentoring network/ e-group	and NGOs continue monitoring/ conservation support • Stakeholders participate in network
3. Skills in conservation biology, planning, advocacy and management are strengthened in local partner organisations and more widely in Haiti	Collaboration with Université Quisqueya postgrad program established • 1 Haitian conservationist receives two-year fellowship on EDGE Fellows programme, including UK training course • Minimum of 20 Haitian conservationists attend the postgraduate course run in Haiti • 1 Haitian conservationist attends DESMAN course in Jersey • 20 students from the postgrad program participate in preparation of MCP documents • Counterpart project manager leads drafting of 1 article for peer-reviewed journal, and 1+ media articles • Haitian project manager plays key role in leading MCP workshops and drafting documents • Successful skills transfer/ responsibility	Postgraduate certificates awarded by Université Quisqueya • Post-graduate DESMAN certificate awarded by University of Kent • Peer-reviewed literature • Course attendance records and feedback forms • EDGE Fellows training course and report evaluation • Project annual reports • MCP document authorship	Core project staff remain in post throughout project • Project offers appropriate training for local partner staff
4. Awareness of status and conservation needs of globally threatened Haitian vertebrates substantially improved at local, national and international level	5,000 threatened vertebrate calendars and posters produced and distributed at meetings with local communities, and in local schools • 'Informational' film on Haitian vertebrate conservation (and its relevance to sustainable-use and livelihoods) produced and broadcast on Haitian television and at local community meetings/schools • Survey of attitudes shows improved awareness and perception of globally threatened vertebrates in communities local to project field sites during the project (baseline Year 1 compared with Year 3) • 6 national radio and TV interviews, 6 national and 1 international newspaper articles • 6 articles and regular blogs published on partner websites • Increasing number of "Haiti" hits on partner websites	Project annual reports • Radio and TV transcripts, newspaper articles, scientific papers • Project partner websites and hit-count • Awareness survey reports	Posters, calendars and film are appropriate media to influence attitudes and change perceptions/behaviour • Media willing to publicise plight of globally threatened Haitian vertebrates

Activities (details in workplan)

- 1.1. Collect baseline data at target field sites
- 1.2. Build GIS and populate with data
- 1.3. Analyse occupancy and habitat data
- 1.4. Prepare scientific and other technical documents

- 2.1. Establish national biodiversity database and clearing-house
- 2.2. Develop steering committees, networks and mentorship systems
- 2.3. Facilitate MCP Planning workshops and community participation
- 2.4. Produce best-practice, MCP and monitoring manuals
- 2.5. Ensure adoption of MCPs into Haiti's NBSAP

- 3.1. Implement UK- and Haiti-based university training for local conservationists
- 3.2. Ensure ongoing skills transfer for Haitian project staff
- 3.3. Undertake regular performance appraisals of Haitian project staff

- 4.1. Implement a programme of local and national awareness raising
- 4.2. Implement a programme of international awareness raising
- 4.3. Survey attitudes towards threatened vertebrates and habitat in local communities

Monitoring activities:

- Indicator 1: Establish Project Implementation Team and report on progress against the Measurable Indicators and individual institutional workplans.
Indicator 2: Undertake 6-monthly formal project evaluations to feed into the 6-month and annual (end of year) reports to Darwin.
Indicator 3: Assess increased skills/capacity of in-country conservationists/host-country project staff on a regular basis.
Indicator 4: Assess attitudinal change towards threatened vertebrates and habitat conservation in local communities.

Annex 3 Project contribution to Articles under the CBD

Project Contribution to Articles under the Convention on Biological Diversity

Article No./Title	Project %	Article Description
6. General Measures for Conservation & Sustainable Use	10%	Develop national strategies that integrate conservation and sustainable use.
7. Identification and Monitoring	25%	Identify and monitor components of biological diversity, particularly those requiring urgent conservation; identify processes and activities that have adverse effects; maintain and organise relevant data.
8. In-situ Conservation	15%	Establish systems of protected areas with guidelines for selection and management; regulate biological resources, promote protection of habitats; manage areas adjacent to protected areas; restore degraded ecosystems and recovery of threatened species; control risks associated with organisms modified by biotechnology; control spread of alien species; ensure compatibility between sustainable use of resources and their conservation; protect traditional lifestyles and knowledge on biological resources.
9. Ex-situ Conservation		Adopt ex-situ measures to conserve and research components of biological diversity, preferably in country of origin; facilitate recovery of threatened species; regulate and manage collection of biological resources.
10. Sustainable Use of Components of Biological Diversity		Integrate conservation and sustainable use in national decisions; protect sustainable customary uses; support local populations to implement remedial actions; encourage co-operation between governments and the private sector.
11. Incentive Measures		Establish economically and socially sound incentives to conserve and promote sustainable use of biological diversity.
12. Research and Training	20%	Establish programmes for scientific and technical education in identification, conservation and sustainable use of biodiversity components; promote research contributing to the conservation and sustainable use of biological diversity, particularly in developing countries (in accordance with SBSTTA recommendations).
13. Public Education and Awareness	15%	Promote understanding of the importance of measures to conserve biological diversity and propagate these measures through the media; cooperate with other states and organisations in developing awareness programmes.
14. Impact Assessment and Minimizing Adverse Impacts		Introduce EIAs of appropriate projects and allow public participation; take into account environmental consequences of policies; exchange information on impacts beyond State boundaries and work to reduce hazards; promote emergency responses to hazards; examine mechanisms for re-dress of international damage.
15. Access to Genetic Resources		Whilst governments control access to their genetic resources they should also facilitate access of environmentally sound uses on mutually agreed terms; scientific research based on a country's genetic resources should ensure sharing in a fair and equitable way of results and benefits.

Article No./Title	Project %	Article Description
16. Access to and Transfer of Technology	5%	Countries shall ensure access to technologies relevant to conservation and sustainable use of biodiversity under fair and most favourable terms to the source countries (subject to patents and intellectual property rights) and ensure the private sector facilitates such assess and joint development of technologies.
17. Exchange of Information	10%	Countries shall facilitate information exchange and repatriation including technical scientific and socio-economic research, information on training and surveying programmes and local knowledge
19. Bio-safety Protocol		Countries shall take legislative, administrative or policy measures to provide for the effective participation in biotechnological research activities and to ensure all practicable measures to promote and advance priority access on a fair and equitable basis, especially where they provide the genetic resources for such research.
Other Contribution		Smaller contributions (eg of 5%) or less should be summed and included here.
Total %	100%	Check % = total 100

Annex 4 Standard Measures

Code	Description	Totals (plus additional detail as required)
Training Measures		
3	Number of other qualifications obtained	1 – Post-graduate DESMAN certificate awarded by University of Kent.
4c	Number of postgraduate students receiving training (not 1-3 above)	20 – Formal training on use of GIS in biological and environmental disciplines. Same students informally trained in biological survey methods, mentored and participated in field activities.
4d	Number of training weeks for postgraduate students	4 (x 20 students) – as per 4c.
5	Number of people receiving other forms of long-term (>1yr) training not leading to formal qualification(ie not categories 1-4 above)	2 – two SAH staff received training and mentorship from the UK project partners, both in-country, and remotely throughout the project.
6a	Number of people receiving other forms of short-term education/training (ie not categories 1-5 above)	2 – SAH staff received 1-week ISLA training, and 10-day mammal fieldwork training with the Darwin project team in the Dominican Republic. 5 – SAH staff received 2-week bird banding training. 10 – local residents (local to the project sites) trained in field survey techniques.
6b	Number of training weeks not leading to formal qualification	25 person training weeks (as per 6a).
Research Measures		
8	Number of weeks spent by UK project staff on project work in host country	6 – involving UK staff from BirdLife, Durrell and ZSL.
9	Number of species/habitat management plans (or action plans) produced for Governments, public authorities or other implementing agencies in the host country (s)	0 – no plans were completed (3 were intended as project outputs). However, the completion of Monitoring and Conservation Plans (MCPs) has been embedded into the developing national protected areas agency (ANAP) strategy for the project sites.
10	Number of formal documents produced to assist work related to species identification, classification and recording.	1 – Monitoring Protocol Manual was drafted and used extensively for field work. It is currently being refined based on field experience and will be finalised and translated into Haitian creole. 12 – mission reports published on SAH website providing summary details and results of each field research expedition.
11a	Number of papers published or accepted for publication in peer reviewed journals	0 – no papers accepted or published. However, a major review paper on the distribution, status and diversity of Haitian frogs is in the final stages of

Code	Description	Totals (plus additional detail as required)
		preparation and draws extensively on field work undertaken by this project.
11b	Number of papers published or accepted for publication elsewhere	0 – no papers accepted or published elsewhere. However, two video essays have been published on line.
12a	Number of computer-based databases established (containing species/generic information) and handed over to host country	2 – one vertebrate locality database developed, populated with historic data and project-derived field data, and one GIS database developed with all available coverages, and analyses vegetation cover data.
Dissemination Measures		
14a	Number of conferences/ seminars/ workshops organised to present/ disseminate findings from Darwin project work	1 – Haiti Biodiversity Expo, 2013.
14b	Number of conferences/ seminars/ workshops attended at which findings from Darwin project work will be presented/ disseminated	5 – SCSCB meeting, Grand Bahama 2011; MacArthur workshop, Port-au-Prince, 2011; Black-capped Petrel Conservation Plan conference, Dominican Republic, 2011; BirdLife Americas Partnership Meeting, Dominican Republic, 2012; CEPF Massif de la Hotte planning workshop, Le Caye Haiti, 2012.
15a	Number of national press releases or publicity articles in host country	6 – Broad press coverage of e.g. the Haiti Biodiversity Expo led to numerous newspaper articles in Haiti.
15b	Number of local press releases or publicity articles in host country	0
15c	Number of national press releases or publicity articles in UK	3 – web articles produced by the three UK partners.
17b	Number of dissemination networks enhanced or extended	2 – Informal project stakeholder network established and involving host country partners and all involved international NGOs communicating on a regular basis; Rezo-Ekolo network of national NGOs established under a CEPF grant but enhanced through significant SAH input supported by this project.
18a	Number of national TV programmes/features in host country	2+ – A taped video interview at the Haiti Biodiversity Expo was broadcast on a number of national TV stations during the course of the Expo.
18c	Number of local TV programme/ features in host country	? – The degree of local take-up of nationally aired TV programs is not possible to evaluate in Haiti.
19a	Number of national radio interviews/features	4 – Several live radio interviews have been broadcast on Haitian radio

Code	Description	Totals (plus additional detail as required)
	in host country	(especially in conjunction with the Haiti Biodiversity Expo).
19c	Number of local radio interviews/features in host country	? The degree of local take-up of nationally aired radio programs is not possible to evaluate in Haiti.
Physical Measures		
22	Number of permanent field plots established	0 - All Black-capped Petrel breeding sites (in the southern Massifs) are being monitored, and the random survey points will be re-visited on an occasional basis to monitor, but the definition of "permanent field plot" is unclear.
23	Value of additional resources raised for project	£375,000 for activities directly related to or building on Darwin project actions

<http://audubonhaiti.org>

www.caribnature.org

Annex 5 Publications

Type *	Detail	Publishers	Available from	Cost
(eg journals, manual, CDs)	(title, author, year)	(name, city)	(eg contact address, website)	£
Poster	David Wege, Verónica Anadón Irizarry, Philippe Bayard, Jean Vilmond Hilaire, Anderson Jean, Jose Nuñez-Miño, Samuel Turvey, Richard Young (2011) <i>A prioritized biodiversity framework for conservation in Haiti's Massif de la Hotte</i>	BirdLife, Cambridge, UK	David.wege@birdlife.org	£125 (layout and printing)
Video essay	Blair Hedges (2011) <i>Saving Haiti's Frogs</i>	Penn State University, US	www.caribnature.org/ Shown during the Darwin Initiative 20 years celebration event	No direct cost to project
Video essay	Blair Hedges (2011) <i>Haiti's Grande Coline</i>	Penn State University, US	www.caribnature.org/	No direct cost to project
Calendar	Société Audubon Haiti (2013) <i>Richesses D'Haiti: Calendrier 2013</i>	Société Audubon Haiti	_____	£6,000 (for 40,000 calendars)
Expo posters (x20)	Société Audubon Haiti	Société Audubon Haiti	_____	

Project news story (web)	2012. Building capacity to save Haiti's biodiversity	BirdLife	www.birdlife.org/community/2012/04/building-capacity-to-save-haitis-biodiversity/	No direct cost to project
Project report	2012. New discoveries of the Endangered Black-capped Petrel (<i>Pterodroma hasitata</i>) in Massif de la Selle, Haiti	Société Audubon Haiti on US Fish and Wildlife Service website	www.fws.gov/birds/waterbirds/petrel/pdfs/Black-capped_Petrel_Note_Nov_Expedition_2011_FINAL.pdf	No direct cost to project
Project news story (web)	2012. More petrels discovered in Haiti	BirdLife/ Société Audubon Haiti	www.birdlife.org/community/2012/02/more-petrels-discovered-in-haiti/	No direct cost to project
Project profile	Building a future for Haiti's unique vertebrates	Eco-Index	www.eco-index.org/search/results.cfm?projectID=1427	No direct cost to project
Project news story (web)	2010. Saving unique biodiversity in Haiti.	Durrell	www.durrell.org/About-Durrell/Durrell-News/Saving-unique-biodiversity-in-Haiti/	No direct cost to project
Project news story (web)	2010. Darwin Initiative commits to building a future for Haiti's unique biodiversity	BirdLife	www.birdlife.org/news/news/2010/03/haiti_darwin.html	No direct cost to project
Project news story (web)	Catriona Davies for CNN. 2010. Haiti's fragile ecosystems facing disaster	CNN	edition.cnn.com/2010/WORD/americas/09/10/haiti.biodiversity/#fbid=la2fCE2pcxk&wom=false	No direct cost to project
Project news story (web)	2010. Building a future for Haiti's unique biodiversity	ZSL, Edge of Existence	www.edgeofexistence.org/edgeblog/?p=825	No direct cost to project
Project news story (web)	2010. Building a future for Haiti's unique vertebrates	ZSL	www.zsl.org/science/news/building-a-future-for-haitis-unique-biodiversity,690,NS.html	No direct cost to project

Annex 6 Darwin Contacts

Ref No	18-011
Project Title	Building a future for Haiti's unique vertebrates
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