



Enabling the people of Montserrat to conserve  
the Centre Hills

# Final Report



Submitted by



The Royal Society for the Protection of Birds  
in partnership with:



Ministry of Agriculture,  
Housing, Lands and  
Environment

**Kew**  
PLANTS PEOPLE  
POSSIBILITIES



**Montserrat**  
*A Caribbean Treasure - Spectacular by Nature*

July 2008

## **ENQUIRIES CONCERNING THIS REPORT**

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# 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	14-027
Project Title	Enabling the people of Montserrat to conserve the Centre Hills
Host country(ies)	UK, Montserrat
UK Contract Holder Institution	Royal Society for the Protection of Birds
UK Partner Institution(s)	Durrell Wildlife Conservation Trust, Royal Botanic Gardens Kew
Host Country Partner Institution(s)	Ministry of Agriculture, Lands, Housing and Environment, Montserrat National Trust, Montserrat Tourism Board
Darwin Grant Value	£160,900
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Project Leader Name	Sarah Sanders
Project Website	<a href="http://www.malhe.gov.ms/centrehills">http://www.malhe.gov.ms/centrehills</a>
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## 1 Project Background

Montserrat (102 km<sup>2</sup>) is located in the Lesser Antilles chain, approximately 27 miles southwest of Antigua. Since 1995, volcanic activity has drastically altered the landscape of the island. The former capital Plymouth was completely destroyed and over 60% of the island is contained within an Exclusion Zone, which is off limits to human activity.

The Centre Hills are the largest intact forest area remaining on Montserrat (see maps Annex 7), so are of global biodiversity importance, supporting many key endemic species including the critically endangered Montserrat Oriole *Icterus oberi*, Montserrat Orchid *Epidendrum montserratense* and Montserrat Galliwasp *Dipoglossus montisserati*. They also provide essential environmental goods and services to the people of Montserrat as they are currently the sole water catchment area and provide protection from soil erosion, landslides and flooding during severe weather events. The Centre Hills are also an important nature tourism product.

Despite this importance, the Centre Hills are under threat. Invasive species such as rats and pigs are having a devastating impact on the ecology of the forest. There is increasing pressure for land (agriculture and housing) as the island's infrastructure is rebuilt in the North.

The purpose of the project was to strengthen the capacity of the people of Montserrat so that they are better able to take targeted action to conserve the Centre Hills. The outputs were: 1) an assessment of the biological resources and socio-economic use so information was available to guide management of the Centre Hills; 2) production of a participatory management plan for the Centre Hills; 3) strengthening of technical and professional skills on Montserrat to conserve, manage and restore the Centre Hills; 4) progression towards establishing the Centre Hills as Montserrat's first National Park; 5) increase in the appreciation of the Centre Hills both locally and internationally; 6) start of a programme of work to manage the Centre Hills.

The main achievements of the project are the completion of two major assessments that have contributed to the development of the Centre Hills Management Plan and provide a comprehensive baseline for future biological and socio-economic monitoring of the area. It has effectively engaged a wide range of local, regional and UK partners to produce and start implementation of the Centre Hills management plan (2008 – 2010). It has significantly increased capacity at the newly established Department of Environment by training staff and supporting the development of legislation, the Conservation and Environment Management Act, which provides for the designation of a National Park and an environment fund.

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

Montserrat is currently not a signatory to the Convention on Biological Diversity (CBD). However, the project has enabled Montserrat to update its environmental legislation so once approved by the Government it should be in a position to sign up to the CBD. The Foreign and Commonwealth Office have advised us that the CBD focal point for the UK Overseas Territories is DEFRA but there has been little interaction. See Annex 3 for project contributions to articles under the CBD.

The project has enabled Montserrat to conserve globally threatened species within the Centre Hills, therefore assisting the UK government to meet its commitment to halt biodiversity loss by 2010 and deliver the Small Islands Work Programme of the CBD especially under the thematic areas of invasive alien species and protected areas. It has contributed to a Darwin thematic review on island biodiversity.

With a DEFRA WSSD grant, Kew hosted a regional conference on the Global Strategy for Plant Conservation (GSPC) in Montserrat in May 2006, which used the Centre Hills Project as a case study for plant conservation activities. There were 15 participants from 10 different countries and territories. Montserrat has and/or continues to contribute to Targets 1,2,3,5 and 14 of the GSPC through ongoing work on the Red List, Montserrat National Trust (MNT) botanic garden and the Species Action Plan project. Project partners assisted BirdLife in the re-evaluation of the status of the Montserrat oriole and forest thrush for the IUCN red list 2008. Using the economic valuation of the Centre Hills as a case study, the project has participated in a DEFRA funded research project 'An evaluation of economic and non-economic techniques for assessing the importance of biodiversity to people in developing countries' led by the University of Aberystwyth.

## 3 Project Partnerships

The international project partners have a long relationship with the Montserrat forestry department and Montserrat National Trust (MNT) that spans over 10 years. **RSPB** visited Montserrat in September 2004, met all key stakeholders and held a meeting to develop the project. RSPB also met with DWCT and RBGK in December 2004, to agree arrangements for the biological assessment.

The six primary project partners signed a Memorandum of Collaboration (Annex 08) in Year 1 and have continued to work well together throughout the project.

The RSPB, as the lead partner, not only supported the biological assessment and research into ecological processes but has also contributed to the project significantly in other ways. Additional expertise was provided in the areas of GIS, project development and management, environmental education and management planning.

The project has strengthened the involvement of **RBGK** and **DWCT** who contributed primarily to the biological assessment but continue to support Montserrat on other projects. RBGK has assisted the MNT in developing a botanic garden to show case some of the native species found within the Centre Hills and put in additional resources for developing ex-situ collections and a herbarium specimen collection for Montserrat duplicated at RBGK. DWCT have supported six months of intensive research on the gallwasp and are leading on the implementation of the OTEP funded capacity building Species Action Project until March 2009. **Montana State University** and **South Dakota State University** gave support to the biodiversity assessment.

**MALHE** (forestry department) have provided staff to support the biodiversity assessment and maintain the databases in conjunction with the national GIS. A significant development during the project was the establishment of the **Department of Environment** in late 2006. The DOE is the agency mandated for the direction and implementation of environmental policy, management of the environment (including addressing environmental priorities, meeting international environmental obligations and providing a supporting environmental framework to ensure sustainable development) and associated activities, and the provision of professional advice on environmental matters. It has taken responsibility for the Centre Hills Secretariat and leads on implementing the management plan. **MNT** has supported the project by providing an office and administrative services for the Centre Hills secretariat and field assistance. The

**Montserrat Tourist Board (MTB)** has provided funding to develop a trail map and a guide to the Centre Hills. They have been responsible for marketing the Centre Hills internationally and regionally as a tourism destination.

A significant achievement of the project has been the engagement of a wide range of additional partners at the local, regional and UK level. On Montserrat, the Centre Hills Management Committee was formed, an advisory group that includes representation from government, civil society and the private sector and works to agreed Terms of Reference (see Annex 09). It has improved relationships between the DOE and civil society. The project has also strengthened the links between DOE and other government departments particularly agriculture, physical planning, GIS unit, forestry, development unit, statistics and the attorney general's office. We have been very grateful for the support given by the Minister and Permanent Secretary of MALHE and the Governor's Office.

The Trinidad based **Caribbean Natural Resources Institute (CANARI)** have played a major role advising on the public participation and consultation aspects of the project. Through an OTEP grant they have made several visits to Montserrat and have facilitated a stakeholder analysis and public participation strategy. Their engagement will continue on Montserrat as the DOE have asked for assistance to develop a participation strategy for the Department.

The **Joint Nature Conservation Committee (JNCC)** have advised on the economic valuation study of the Centre Hills. **Van Beukering Consultants** (Netherlands) were contracted to undertake the study.

Montserrat has been active within the **BirdLife Caribbean** network. Project staff have benefited from regional training opportunities and supported the development of a further regional Darwin project on globally threatened birds.

The **Society for the Conservation and Study of Caribbean Birds (SCSCB)** has run a teachers wetland workshop in April 2006. The President visited Montserrat in early July 08 to explore input to the next SCSCB conference to be held on Antigua in July 09.

A full list of project partners/collaborators is given in Annex 20.

## 4 Project Achievements

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

Although too early to draw any firm conclusions, it is anticipated the project will impact positively on all three of the Darwin Initiative's generic goals.

In terms of impacts on biodiversity, the project was successful in establishing a baseline for key species and habitats and setting up protocols to monitor their status in the future. In terms of plants, it has justified the urgent need for the project as populations of endemic species have been lost in recent years in and around the Centre Hills (e.g. *Rondeletia buxifolia* lost to development of water tank, *Epidendrum montserratense* lost to volcanic activity). All indications are that the status of globally threatened species and habitats will be improved through the conservation of the Centre Hills as a National Park if Montserrat can identify the resources to implement all actions identified in the management plan, particularly the control and/or eradication of invasive species (e.g. rats and pigs).

With regards to sustainable use, Montserrat is currently not maximising the opportunities provided by the Centre Hills. The management plan addresses the need for monitoring, regulation and control of resource extraction from the Centre Hills, which was previously limited.

In terms of the equitable sharing of biodiversity benefits, the economic valuation (see Annex 10) has calculated the Total Economic Value (TEV) currently provided by the Centre Hills to the people of Montserrat. The tentative estimate is around US\$1.4 million/year with a minimum and maximum value of US\$ 0.9 million/year and US\$2 million/year respectively. The most important value is tourism, which comprises 32% of the TEV, followed closely by water at 30%. Forest products for domestic consumption (15%) are also highly valued ecosystem goods. The

management plan allows for the development of sustainable agriculture, nature tourism and water production in a way that will harness the potential of the Centre Hills natural resources without degrading or threatening them in anyway.

## **4.2 Outcomes: achievement of the project purpose and outcomes**

The project has successfully achieved its purpose, which was to make the people of Montserrat better able to take targeted action to conserve the Centre Hills Forest Reserve. A management plan for the Centre Hills has been produced (see Annex 11) and some activities led by the DOE are under implementation (see Annex 12 for review of progress). The Conservation and Environment Management Act (see Annex 20 for final draft) is in the process of finalisation and should be ready to present to the government for approval in September 2008. It provides for the designation of the Centre Hills as a National Park and an environment fund to support future conservation activities on the island.

In terms of outcomes, the economic valuation of the Centre Hills has increased understanding in a range of government departments and amongst decision makers about the value of the Centre Hills for Montserrat, not just in biological terms but also because it is an important product to attract tourists and currently the sole source of water on the island. A workshop in June 2008 brought together decision makers and communication specialists on the island to draw out the key messages from the study and develop a communication strategy to facilitate their integration into policy processes on the island. It was extremely encouraging to hear an economist from the development unit on the radio in June 2008 explaining the integral role the Centre Hills play in economic development for the island and the Minister of MALHE referring to the Centre Hills Management Plan on the main stage at the Reunion Conference (July 2008). At the same time, the biological assessment and research has facilitated improved action to conserve the hills by identifying the priorities, and developing our understanding of the pressures, states and responses of the biodiversity. Although it is early days, we believe these are key steps forward in ensuring the Centre Hills will be conserved in the long-term.

The project continues to 'open doors' to Montserrat. It has been extremely successful in leveraging additional funds from OTEP and brought in new partners like JNCC and CANARI.

## **4.3 Outputs (and activities)**

The project has successfully achieved all outputs.

### ***1. Knowledge of the ecology and socio-economic use of the forest is available to guide management of the Centre Hills***

The project was very successful in collecting the information required to develop the management plan and establishing a baseline to monitor the status of key species and habitats.

The biological assessment is completed and although will be published later this year is currently available at <http://www.durrell.org/Conservation/Where-we-work/Caribbean-Islands/> (see Annex 17). The highest priority recommendations for conservation can be found on page 9 and include:

- habitat restoration to reduce the impact of invasive species (e.g. feral pigs)
- continued monitoring of the Montserrat oriole and other forest birds as indicators of the health of the forest
- increasing protection at hotspots such as the Woodlands area for the galliwasp
- extending the boundary of the Centre Hills towards the North to include more of the dry zone.

The socio-economic assessment (see Annex 18) was also completed and now published as part requirement for an MSc in Environment Education at the Florida Institute of Technology. The results of the survey revealed several things. Of great significance is that almost 90% of subjects feel that Montserrat needs a national park and even more felt that Montserrat should

be promoted as an ecotourism destination, although there did not appear to be a consensus as to what a national park was or should be. Most persons did not regularly spend time in the Centre Hills, and the most common activities engaged in there were hiking, farming, and tending livestock. With regards to the importance of the Centre Hills most people recognise they are the source of water on the island, however, many were not able to accurately identify various globally important species of fauna and flora, particularly the endemic orchid. A significant finding was that the majority of people are not engaged in environmental planning although most thought they had responsibilities towards the environment. There is also a wide range of perceived knowledge of the state of various natural resources in Montserrat. Some of the major non-natural threats to the environment were identified as pollution, loose livestock, invasive species, and lack of education of residents. Residents have a mixed level of appreciation about the existence and effectiveness of various environmental regulations.

For the first time on Montserrat, a land ownership map has been prepared on the GIS for the Centre Hills, which shows that just 33% of the area is crown land, 64% is privately owned and 3% is unclaimed. Three estates own approximately 89% of this private land so having these land owners on board is integral to management of the area. Most of the private landowners support the designation of the Centre Hills as a National Park and the establishment of co-management agreements. However, a couple expressed reservations so further discussions are required. The forest boundary and many of the 20+ foot trails have been mapped for the first time using GPS technology. This data has been added to the national GIS.

With support from OTEP, an economic valuation has been undertaken to calculate the Total Economic Value (TEV) of the Centre Hills. The ecosystem services valued were tourism, water supply, recreation, aesthetics, species abundance, forest products, hazard protection and carbon sequestration. The tentative estimate of the TEV is around US\$1.4 million per year, with a minimum and maximum value of US\$0.9 million and US\$2 million per year, respectively. Because the Centre Hills are currently the only source of drinking water on Montserrat, 30% of the TEV of the Centre Hills is determined by water services. The most important value, however, is the tourism value which comprises 32% of the TEV. Species abundance (18%) and forest products for domestic consumption (15%) are also highly valued ecosystem services in Montserrat.

Research into the ecological processes of the forest is on-going and continues to be supported by funding from RSPB (see Annex 19 for update). It has involved the establishment of experimental and control areas to monitor the impact of rats on biodiversity. It will take another couple of years of data collection before we will be able to see a recovery from the impact of rats.

## ***2. Participatory management plan is produced for the Centre Hills***

The project has successfully produced a participatory management plan.

At the start of the project, a Memorandum of Collaboration was signed by all project partners to agree the commitment and contributions involved.

CANARI, regional experts on participatory natural resource management, were brought in to advise on the process. Workshops were held to undertake a stakeholder analysis and prepare a participation strategy for the development of the management plan. A multi-stakeholder planning workshop (48 participants representing key stakeholders) was held in September 2006 to draft the plan. Results from the biological and socio-economic assessments were presented and plans for the future outlined. A vision of the Centre Hills was produced, as well as identification of four objectives based on the priorities identified in the biological and socio-economic assessments. These are: 1) Promote sustainable livelihoods of resource users in and around the Centre Hills; 2) Conserve biodiversity, habitats and ecosystem services of the Centre Hills; 3) Provide recreational and educational opportunities in the Centre Hills for the people of Montserrat and visitors; 4) Enable effective legislative, institutional, and fiscal structures and systems to support sustainable management and stewardship of the Centre Hills.

Following the workshop, focus groups (tourism, agriculture, water, landowners and the Centre Hills Management Committee) were set up to refine and validate the objectives (see Annex 13 for list of meetings during project).

It was agreed the management plan (see Annex 11) should run for 3 years (January 2008 – December 2010) and that the Department of Environment (established during the project) will be the Secretariat and lead on implementation. The total cost of implementing the plan has been calculated. The costs for Year 1 range from a maximum of US\$1.5 million to a minimum of US\$ 0.7 million, when non-essential activities are excluded. The costs of conserving the Centre Hills are therefore less than the economic benefits provided as tentatively estimated at around US\$1.4 million per year, with a minimum and maximum value of US\$0.9 million and US\$2 million per year, respectively.

The Centre Hills Management Committee, which includes representation from government, civil society, landowners and the private sector, was established to oversee and provide guidance to the project. It has met 3 times during the third year of the project to validate and sign off the management plan, the last time being September 2007. To avoid duplication and make efficient use of time, it is proposed the Environment Board as detailed in the new legislation, will take on the functions of the Centre Hills Management Committee as it is made up of similar stakeholders.

RSPB met with the local project partners in June 08 to review progress on management plan implementation (see Annex 12). All have renewed their commitment to implementation but have expressed concerns about funding.

### ***3. Technical and professional skills to conserve, manage and restore the Centre Hills are strengthened on Montserrat***

The project was able to involve a wide range of people in training activities that were more extensive than originally anticipated. This was due to greater than expected opportunity for local partners and field staff to receive on the job training from UK partners in the field and participation at overseas training events.

A total of 25 persons received 67.4 weeks of training during the project. 14 training workshops have taken place including public involvement in decision making, GIS, MEAs and strategic planning, environmental education, plant conservation, participatory forest management, project management, ecological monitoring, economic valuation and tour guiding (See Annex 13). Additional persons have benefited from participation at the planning workshops and focus groups.

All data collected through the project has been inputted into databases set up at the Forestry Department and GIS Unit. They currently cover plants, birds, galliwasps and mountain chickens. Invasive species and hydrological data will be added in the future.

A major success was the strong relationship between the project manager (provided by RSPB but based on Montserrat) and the local counterpart project manager where there was great emphasis on the transfer of project management skills. The local counterpart project manager was promoted to project manager in April 2007 and has successfully managed the project for the third year. They and the two field staff recruited by the project are now employed by the Department of Environment, significantly bolstering its technical and professional capacity and ensuring the institutional memory built up during the project is not lost. Equipment procured through the project including computers, furniture, GIS software, microscope, digital camera and field collection gear have been transferred to the DOE and MNT.

During the project lifespan, four applications were successfully submitted to OTEP, to support activities in the Centre Hills. These were:

- Y1 Legislative Review (£21,690)
- Y2 Economic Valuation (£49,370) and  
Capacity Building for Species Action Plans (£63,470)
- Y3 Environmental Regulations (£18,570)



#### **4. Significant progress is made towards establishing the Centre Hills as Montserrat's first Protected Area**

As existing legislation for conservation and protected area management was pre volcano it urgently required updating to reflect recent scientific data, the pressures resulting from the movement of people to the North of the island and the international MEAs that Montserrat is or plans to sign up to. Additional funding was received from OTEP to undertake a comprehensive review and draft new environmental legislation. Extensive consultations with landowners, resource users and managers, decision makers and the public have taken place and the draft Conservation and Environmental Management Act (CEMA) is currently under finalisation (see Annex 21). The new act updates existing legislation with regard to the creation and management of protected areas. The process is being driven by Department of Environment with support from the Attorney General's Office who consider this the most consultative piece of legislation ever to be drafted on Montserrat. Executive Council (ExCo) have been kept informed throughout by a series of papers. The first was informational, advising members about the legislative review process. The second sought endorsement on the GPS forest boundary, which was given on March 15<sup>th</sup>, 2007. Although it has taken longer than expected, the plan is for the Minister to circulate the CEMA to ExCo in August and present to the house for approval in September. It is then hoped the Centre Hills can be designated a National Park by the end of 2008 via an Executive Order.

The biological assessment has highlighted dry forest as a habitat currently under represented within the existing Centre Hills boundary. It was agreed by stakeholders that it was better to keep with the existing boundary and get the Centre Hills designated first and then open up this discussion.

#### **5. Appreciation of the Centre Hills forest and an awareness of its value is increased locally and internationally**

Local media support to the project has been exceptional and played an important role in raising awareness and building support on Montserrat. Since the start of the project, there have been 26 articles in the written press, 34 radio interviews and 3,750 newsletters distributed locally (see Annex 14 and 15). According to a survey undertaken in 2007 by the Montserrat Environment Education Project (MEEP), 72.6% people on Montserrat listen to the radio daily, which means that over three quarters of the population will have heard about the project. The socio-economic survey showed that most people on Montserrat do not go into the Centre Hills (most popular activity was hiking at 14%), however 86% felt that protecting the environment was important and should be given priority. As the MEEP undertook its survey in November 2007, it was considered too soon to undertake a project exit survey in 2008 to see whether awareness has increased but recommend this is done in a couple of years time (identified as an activity in the Centre Hills management plan).

The project has also been successfully promoted within the Caribbean region and the UK through the BirdLife Caribbean Programme, the Society for the Conservation and Study of Caribbean Birds, the UK Overseas Territories Conservation Forum, Kew, UK Overseas Territories Association, Hackney Caribbean Elders Association and the Darwin Initiative (see Annex 14).

We were delighted that the Prince of Wales chose to visit the Centre Hills Project during his recent visit to the Caribbean. His interest was extremely helpful in highlighting the importance of the Centre Hills to the Chief Minister and other high-level decision makers.

The project website ([www.malhe.gov.ms/centrehills](http://www.malhe.gov.ms/centrehills)) has received over 20,000 hits since its inception in May 2006.

A project leaflet has been produced which folds out into a poster on one side (see Annex 15). T-shirts and promotional pencils have been distributed widely. Calabash festival flyers with 15 messages about the Centre Hills have been adapted for schools.

During the project 424 exit surveys were collected at the airport. These showed that the natural environment was one of the three main reasons persons visited Montserrat and that all trails were being used in the Centre Hills. Prior to the project only two tourist trails were being

extensively used. Now, with the development of a trail map and an outreach strategy developed by the MTB, MNT and Forestry Department, hikes have been organised on each trail (depart each Saturday before a public holiday). The exit survey also confirms that most people found their visit to Montserrat exceeded expectations.

A workshop for teachers was held on Montserrat in July 2007 and an education pack produced (see Annex 16). The project manager has given lectures on the Centre Hills at host training sessions.

#### **6. Programme of work to manage the Centre Hills is started**

ExCo confirmed the existing boundary and land parcels on the 15<sup>th</sup> March, 2007. The forestry department clear the boundary using approximately 12 contractors on an annual basis. It was last cleared in October 2007.

Although 6 months later than planned, the management plan began implementation in January 2008 so we are only halfway through the first year. A review of progress in June 2008 confirms that more than two interventions are underway (see Annex 12). These include the development of species action plans, which are completed for the mountain chicken and galliwasp. Funding has been leveraged from OTEP to prepare the regulations to accompany the Conservation and Environment Management Act. The Department of Agriculture are supporting an intensive livestock farming project.

#### **4.4 Project standard measures and publications**

See Annex 4 and 5. The project has far exceeded the anticipated standard measures in many areas.

#### **4.5 Technical and Scientific achievements and co-operation**

A biological assessment, led by Dr Richard Young of the Durrell Wildlife Conservation Trust, was undertaken to inventory key taxa within the Centre Hills, assess the status of species of global conservation concern, identify important biodiversity areas and assess the impacts of invasive plants and animals on native species. The biodiversity assessment has been written up, subject to internal peer-review, and published by DWCT as the first report in a series of conservation monographs. An outline of the institutions involved, the methodologies used and the results are included in the report (see Annex 17).

Research, led by Dr Geoff Hilton of the RSPB, is on-going to determine the nature and magnitude of rat impacts on biodiversity in the Centre Hills and to explore the feasibility and costs of on-going rat control. A 13 ha 'experimental area' has been established in the western part of the Centre Hills within which rats are killed using diphacinone poison deployed in bait stations. The experimental area is flanked by two similar 'control areas' in which rats are not killed. The aim is to maintain continuous rat control over the medium-term in the experimental area, in order to determine the costs, effectiveness and preferred methods of rat control, and the biodiversity benefits that accrue. Data are gathered on a continuous rolling basis on rat abundance (tracking tunnels), and the costs required to achieve a given level of control; the abundance of herpetofauna, birds, invertebrates and plant seedlings is measured at regular intervals, and bird nest success is also determined. Before-and-after comparisons of the response of native biodiversity to the rat control are made, with the other sites as controls.

In two separate areas of the Centre Hills, a long-term assessment of rat population biology and diet is being run, which attempts to understand why rats are so abundant in the Centre Hills, and when they might most effectively be controlled. This involves repeated trapping sessions, with dissection of rats, species identification, ageing, sexing, morphometric measurements and diet analysis.

Data collection will need to continue for at least another year, and preferably longer, so that there is sufficient time for a biological response to be detectable in the forest. An update is included (see Annex 19). An invited oral presentation about the experiment was presented at the 6<sup>th</sup> European Vertebrate Pest Management Conference in Sept 2007, and a scientific paper is planned for 2010.

Wider plant inventory work was co-ordinated by Dr Colin Clubbe and Martin Hamilton of the Royal Botanic Gardens Kew. It was conducted across the island to enable a new vegetation map to be produced for the whole island rather than just the Centre Hills.

A socio-economic assessment, led by Carole McCauley of the RSPB, was undertaken to establish baseline data about residents' knowledge, attitudes, and perceptions about natural resources and their management in Montserrat, and the extent of resource use within the Centre Hills. The survey instrument was designed by project staff and partners, and data were collected through structured interviews of 237 persons by two experienced enumerators. The survey concurrently served as the basis for an MSc research project by Carole McCauley, the Project Manager/Adviser. Technical guidance was provided by her academic adviser, Dr. Tom Marcinkowski, Associate Professor in the Department of Science and Math Education at the Florida Institute of Technology. The research has already been selected for presentation at the North American Association for Environmental Education's annual conference in October 2008. It is anticipated that one or two peer-reviewed journal research articles will be prepared later this year for the Journal of Environmental Education and/or the Caribbean Journal of Education (see Annex 18).

#### **4.6 Capacity building**

All of the host country partners have increased their capacity for biodiversity conservation. The Department of Environment, was only established in late 2006 and has been the main beneficiary as it is responsible for biodiversity conservation on Montserrat. The project has directly contributed to increasing the DOE's capacity by developing new environmental legislation that has provision for the establishment of a national park and an environment fund to finance activities in the future. It has assisted the DOE in meeting requirements under the new legislation by producing a management plan and establishing monitoring protocols and databases for the Centre Hills. It has trained all existing staff in the forestry department, provided two new additional staff, and given a vehicle, computers and other equipment. In the last few months, the MNT and DOE have used enhanced capacity developed during the project to facilitate an invasive species workshop. The DOE have undertaken a public consultation on the draft energy policy for Montserrat.

The capacity of the MNT has increased through the development of a botanic garden and associated infrastructure that will showcase native and threatened plants from the Centre Hills.

The MTB has benefited from assistance to develop tourist products such as a trail map and leaflet.

The project has also broadened the experience of RSPB and the UK partners. Lessons learnt from the development of the participatory management plan and economic valuation will be applied to RSPB projects elsewhere around the world.

#### **4.7 Sustainability and Legacy**

The project has been successful in assisting Montserrat to establish a framework to support the conservation of the Centre Hills in the future. A management plan has been produced and there is every indication that it will be implemented to some extent although some activities will require additional funding (e.g. management of invasives, development of environmental education centre). The Department of Environment has taken over the secretariat for the Centre Hills and has integrated this function into its annual work plan (08-09). The Conservation and Environment Management Act is currently being finalised and will govern most aspects of biodiversity conservation and protected area management in Montserrat, as well as making provision for the development of a multi-stakeholder Environment Board that will be based on the Centre Hills Management Committee and an environment fund to finance future conservation activities.

Two of the three local project staff have gone through a competitive recruitment procedure and are now employed by the Department of Environment so knowledge and skills developed through the project will continue to contribute to environmental management on Montserrat. The third staff member is employed on a contractual basis to support the ongoing research into rat impacts. An application was made for Jervaine Greenway to enter an environmental

management programme at the University of the West Indies in September 2007, however an administrative mix up meant he was accepted on to the wrong course. Montserrat Government regulations state that a government employee can only apply for a scholarship after they have worked for 3 years so we hope he will reapply in a couple of years time. The vehicle and computers have been handed over to the DOE and other equipment shared with the MNT.

All project partners have confirmed their commitment to the Centre Hills and agree the identification of resources and implementing activities in the management plan is going to be critical in the next few years. A priority for the RSPB will be to assist Montserrat in setting up an environment fund so it can support conservation activities in the future. A grant has been received from OTEP to develop the regulations/governance structure for the fund and the economic valuation study has identified some potential sources of revenue, particularly the willingness to pay by tourists, which is currently not capitalised by the Montserrat Government.

Another priority for project partners will be to address the issue of invasive species, particularly loose livestock and feral pigs, which are devastating native vegetation and potentially could be a disaster to the tourism industry which is seeking to expand on the island.

Funding is a constraint but the Montserrat government is taking active steps to address this. Some activities from the Centre Hills Management Plan have been included in the agriculture, environment and tourism department workplans and have budgets allocated to take them forward. The Development Unit are insisting invasive species form the basis of Montserrat's input to a European Commission EDF 10 regional application for a sustainable tourism project as they recognise the links between feral livestock, pollution of water courses and detrimental impacts to tourism in the Centre Hills.

## **5 Lessons learned, dissemination and communication**

The main reason for the success of the project has been the emphasis on stakeholder involvement. Although this has meant it has taken longer than planned to develop the management plan and new legislation, there is local ownership, which is essential if they are to be taken forward at the end of the project. A key lesson learnt from the project is allowing sufficient time to ensure meaningful participation and this can take years.

Another lesson was recognising that different stakeholders require different approaches to get them engaged and that a stakeholder group may not be representative of a particular interest. For example, some landowners will not sit round a communal planning table but have a strong influence and therefore a right to be heard. To accommodate their views we met with them on an individual basis.

On reflection, it would have been helpful to undertake the economic valuation study at the start of the project as it has raised awareness amongst decision makers from a range of government departments about the benefits accrued from the Centre Hills. It more than justifies the costs identified in the management plan.

Although the project has strengthened the capacity of the DOE, there are still only a few persons on the island with the technical skills to take forward conservation work. External assistance will continue to be required if Montserrat is to meet its environmental responsibilities and maximise its opportunities to sustainably use its biodiversity resources.

Finally, the project has shown the value of using a Darwin project to leverage resources from other sources. The additional funding raised from OTEP enabled the project to develop an effective participatory process, draft much needed environmental legislation, support the production of species action plans and undertake an economic valuation.

The support from the local media on Montserrat has been outstanding and key to raising awareness and building support from the general public for the Centre Hills. There has been extensive coverage on the project through radio, television, newspapers, newsletters, journal articles, the project website, electronic discussion groups, public meetings and consultations, leaflet and posters and general word-of-mouth. Briefing papers have been prepared for the Minister and Executive Council. Education materials have been developed to use in primary schools. Presentations have been given at regional and international conferences and meetings.

Information from the project continues to be disseminated. The DOE has agreed to take on the Centre Hills project newsletter and website and expand them so they cover all environment issues on Montserrat. A policy communications strategy is under preparation to take forward the main messages from the economic valuation study in the next year. The Montserrat Centre Hills will be used as a case study at the Reunion conference in July 2008 and included in the associated publication *Climate Change and Biodiversity in the European Union Overseas Entities*:

<http://reunion2008.eu/pages/en/en-publication.html>.

## 5.1 Darwin identity

The Darwin logo has been added to all project documentation and the vehicle. Pencils and t-shirts with the logo were also produced and widely disseminated.

We were delighted that Prince Charles asked to meet staff from the Centre Hills Project during his visit to Montserrat in March 08. Briefings provided to Clarence House beforehand and the press release fully acknowledged the support of the Darwin Initiative, which subsequently was published on the Darwin, RSPB and project websites.

Inevitably, the Darwin Initiative has become less distinct as the project has grown and gained local ownership. As numerous partners were involved in the project and additional funding received from OTEP, an independent project logo was developed for the Centre Hills.

The Director and some staff at the Department of Environment are very aware of the goals and purpose of the Darwin Initiative. However, this is probably not replicated amongst other local partners and stakeholders.

## 6 Monitoring and evaluation

There were no major changes to project design during implementation only some activities (e.g. the production of the management plan) took longer than anticipated.

Monitoring and evaluation activities (e.g. data collection) were included in the annual project workplans and a results table constructed to collect information on project outputs/standard measures as they were achieved (e.g. press releases, training, meetings etc.).

We were successful in achieving most indicators (see log-frame Annex 1) and have collected baseline data for the Centre Hills on:

- species and habitats
- knowledge, perceptions, and behaviours
- economic use (tourism, water supply and forest products)

However, we were not successful in measuring some indicators identified under output five, appreciation of the Centre Hills forest and an awareness of its value is increased locally and internationally. For example, we can't show that the number of visitors have increased because there was no baseline before the start of the project. There were also a number of factors beyond the project's control including the discontinuation of the ferry service which has meant the number of tourists to the island during the project have decreased. Although indications are that awareness about the Centre Hills has increased locally, we were unable to undertake a project exit survey to confirm this. There have been three social surveys on Montserrat and a fourth to start in August 2008 so we felt it was too soon to do another but recommend this is repeated in a couple of years time (identified as an activity in the Centre Hills Management Plan).

The log-frame has been an essential tool to review project progress which was done on a six monthly basis. The indicators were on the whole useful but perhaps too ambitious for output five and don't really measure project impact, particularly changes in ecosystem health and peoples/institutional behaviour, although these will only be picked up beyond the duration of the project.

On reflection, there were perhaps not sufficient resources allocated to monitoring. In the future, we would work with project partners to develop a separate monitoring and evaluation plan to ensure that all indicators are adequately covered and that resources are available.

There has been no external evaluation of the project but a 'mini' internal evaluation took place with local partners to write the final project report. All were pleased with project progress and felt that objectives had been achieved but expressed concern about the future financing of the management plan implementation.

## **6.1 Actions taken in response to annual report reviews**

The main comment from the last annual report was associated with the socio-economic assessment. It was felt that further analysis needed to be done to identify the key messages emerging. The work has now been written up as an MSc thesis and recommendations listed in chapter 5 (see Annex 18).

The annual reviews have been discussed with project staff, partners and colleagues at the RSPB. The comments have been constructive and provided helpful guidance to the project.

## 7 Finance and administration

### 7.1 Project expenditure

Expenditure Category	Budget (£)		Expenditure (£)					Variance
	Original	Final	Y1 (05-06)	Y2 (06-07)	Y3 (07-08)	Y4 (08-09)	Total	(%)
Rent, rates...								-
Office costs								-3.36%
Travel and subsistence								+5.03%
Printing								-19.95%
Conferences								+0.24%
Capital items								+6.31%
Others								-28.93%
Staff costs								-1.21%
<b>TOTAL</b>	<b>160,900.00</b>	<b>160,900.00</b>	<b>52,834.27</b>	<b>81,399.73</b>	<b>23,785.99</b>	<b>1,889.00</b>	<b>159,908.99</b>	<b>-0.62%</b>

The following amendments from the original budget were implemented during the course of the project.

- Office Costs budget was increased by £1,000 to cover excess spend in this category during FY 07/08. Approval from Darwin was received 25<sup>th</sup> February 2008.
- Due to lower than expected travel costs at the beginning of the project, the travel budget was reduced by £3,000 in FY 05/06 (approval received 31<sup>st</sup> March 2006) and by a further £5,000 in FY 06/07 (approval received 1<sup>st</sup> March 2007).
- The printing budget was decreased by £1,450 in FY 05/06 (approval received 31<sup>st</sup> March 2006). However, an additional printing budget of £2,500 was created for the project extension of 3 months during FY 08/09, to cover the costs of printing the education materials and management plan. Approval for the extension was received on 25<sup>th</sup> February 2008. These 2 transfers caused a net increase in printing budget of £1,050.
- Due to lower than expected spend, the conferences budget was reduced by £3,589.62 in FY 05/06 (approval received 31<sup>st</sup> March 2006). This request also accounted for the increase of £9,539.62 in the staff costs budget to cover the increased costs of salaries.
- Note that unspent grant of £17,032.83 was carried forward from FY 05/06 to FY 06/07 due to a general underspend during the first project year.

Variations in expenditure of +/- 10% of budget were observed on the following categories:

- *Printing* (20% under budget). This was primarily due to cost-savings found on the education materials printed during the project, which came in significantly under budget.

- *Others* (29% under budget). Funds allocated for legal advice (budgeted at £1,000) were not needed, as it was covered by the OTEP legislation project.

## **7.2 Additional funds or in-kind contributions secured**

The project was very successful in leveraging a total of **£649,007.85** (4:1) additional funding to support activities.

£153,100 was raised from OTEP to support a review and drafting of new environmental legislation, an economic valuation of the Centre Hills, the development of five species action plans and regulations to support the environmental legislation.

DWCT have contributed £109,042 to support the biological assessment and research on the galliwasp.

RSPB has contributed £71,555.85 to oversee project management, continue the research on rat impacts and support a project manager.

RBGK has contributed £255,300 in staff time to support the development of the botanic garden at the MNT, seed collection for conservation, botanical training and a TV documentary (A year at Kew).

MTB has allocated £14,500 within their budget to support the production of a Centre Hills Guide which is planned to be published by 2009.

MNT gave £1,500 and MAHLE £44,010 of staff time to the project.

Additional in-kind time came from the Attorney General's Office and RSPB (support to GIS and boundary mapping).

## **7.3 Value of DI funding**

The following would not have been achieved without support from the Darwin Initiative:

- Production of a management plan for the Centre Hills (2008 – 2010)
- Increased staff capacity at the Department of Environment
- Research on the impacts of rats on the biodiversity of the Centre Hills
- Increased local understanding of the importance of the Centre Hills to Montserrat
- Development of the Conservation and Environment Management Act
- Integration of biological data on the national GIS
- Economic valuation study
- Progress made towards establishing the Centre Hills as a National Park (planned for end of 2008)



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

Project summary	Measurable Indicators	Progress and Achievements May 05 – June 2008	Actions required/planned for next period
<p><b>Goal:</b> To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but constrained in resources to achieve</p> <ul style="list-style-type: none"> <li>• The conservation of biological diversity,</li> <li>• The sustainable use of its components, and</li> <li>• The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources</li> </ul>			
<p><b>Purpose</b></p> <p>The people of Montserrat are better able to take targeted action to conserve the Centre Hills Forest Reserve for present and future generations</p>	<p>Centre Hills are designated a Protected Area by end of Y4</p> <p>Actions in management plan are initiated and led by local team from Y3</p>	<p>New environmental legislation to enable the designation of the Centre Hills as a National Park is drafted and currently being finalised by AG's office</p> <p>Management plan (2008 – 2010) under implementation and led by the Department of Environment (Secretariat). See Annex 12 for review of progress</p>	<p>Legislation to be presented to EXCO by August 08 and read out in the House in September. Centre Hills to be launched as a National Park by Jan 09.</p>
<p><b>Output 1.</b></p> <p>Knowledge of the ecology and socio-economic use of the forest is available to guide management of the Centre Hills</p>	<p>Management plan by end of Y2 integrates conservation of species and habitats and socio-economic needs</p> <p>All key stakeholders support scientific and socio-economic basis for management plan by end of Y2</p>	<p>- Management plan is based on priorities identified in the biological and socio-economic assessments. The four objectives are: 1) Promote sustainable livelihoods of resource users in and around the Centre Hills; 2) Conserve biodiversity, habitats and ecosystem services of the Centre Hills; 3) Provide recreational and educational opportunities in the Centre Hills for the people of Montserrat and visitors; 4) Enable effective legislative, institutional, and fiscal structures and systems to support sustainable management and stewardship of the Centre Hills.</p> <p>- Workshop (48 participants representing key stakeholders) to develop management plan in September 06. Focus groups (tourism, agriculture, water, legal, landowners, CHMC) held to validate the plan.</p>	

Activity 1.1 Recruit project manager, and 3 local staff	Completed October 05.
Activity 1.2 Establish project steering committee, assign roles among members and create an email group	PSC established June 05. Email group <a href="mailto:MontserratCentreHills@yahoo.com">MontserratCentreHills@yahoo.com</a> set up Nov 05. 18 members. 120 messages posted.
Activity 1.3 Centre Hills PSC Management Meetings	Met 9 times - 06/06/05, 26/09/05, 14/03/06, 11/09/06, 22/11/06, 01/02/07, 05/04/07, 26/07/07, 09/09/07.
Activity 1.4 Planning workshop for biological assessment	June 05.
Activity 1.5 Undertake biological assessment	Fieldwork completed December 06.
Activity 1.6 Produce Habitat Map (Kew)	Completed September 07.
Activity 1.7 Summary report of biological assessment	Completed December 07. Published June 08.
Activity 1.8 Develop and handover computer database	Completed for plants, birds, mountain chicken and galliwasp. May 08. Lodged at Agriculture and GIS unit.
Activity 1.9 Research processes impacting Centre Hills (rats)	Ongoing. RSPB supporting work until Mar 09.
Activity 1.10 Train fieldofficers to collect data	2 project fieldofficers trained Dec 05 and on the job through frequent supervisory visits by RSPB, Durrell and Kew staff.
Activity 1.11 Produce biodiversity protocol to monitor key species in the Centre Hills	Workshop to identify priority variables held on Montserrat, Sep 07. Updated bird monitoring protocol and database developed in 2006/7 and deployed in 2007 and 2008 by the DoE. Updated Mountain Chicken protocol developed and implemented in 2008. Produced for plants September 2007.
Activity 1.12 Report produced on rat control research	Update completed June 08.
Activity 1.13 Undertake social, cultural and economic assessment	Completed Aug 06.
Activity 1.14 Summary report of social, cultural and economic assessment and consultation process	Report published Nov. 06.
Activity 1.15 Recruit volunteer to collect and map data on land use, trails etc.	May 06 (Carrie Hume, RSPB).

Activity 1.16 Land use, trails etc. mapped.	Completed Aug 06.
Activity 1.17 Conduct economic valuation research	Completed Jan 08.
Activity 1.18 Publish economic valuation report	Report published June 08.
<b>Output 2.</b> Participatory plan is produced for the Centre Hills	<p>2 stakeholder workshops (Y1&amp;2)</p> <p>All key stakeholders sign up to management plan by Y2</p> <p>All key stakeholders renew their commitment to the implementation of the plan at the end of the project</p> <p>- 3 major stakeholder workshops held plus numerous consultations and focus group meetings to solicit participation in planning</p> <p>- Centre Hills Management Committee endorsed plan in September 07</p> <p>- Six project partners have renewed their commitment to the Centre Hills and agreed to support implementation of plan (June 08)</p>
Activity 2.1. Prepare plan for consultation process	Completed Oct 05.
Activity 2.2. Implement consultations (meeting with community groups, landowners etc.)	Ongoing - Extensive outreach and consultations during project.
Activity 2.3 Map, review and agree Centre Hills Boundary	Completed Aug 06.
Activity 2.4 Management Plan Workshop	Held on Montserrat 11 <sup>th</sup> – 15 <sup>th</sup> Sept. 06.
Activity 2.5 Complete Management Plan	Completed Dec 07.
Activity 2.6 Circulate Plan to Stakeholders	Extensive consultation and meetings Oct – Dec 07.
Activity 2.7 Publish and Launch Management Plan	Published June 08. Launch to be held when Centre Hills officially designated a National Park (potentially before end of 08)
Activity 2.8 Seek and secure resources for implementation	<p>4 successful applications to OTEP:</p> <ul style="list-style-type: none"> <li>- Legislative review (06 – 08)</li> <li>- Economic Valuation (07 – 08)</li> <li>- Species Action Plans (07 – 09)</li> <li>- Environmental Regulations (08 – 09)</li> </ul> <p>RSPB contract for rat control research (08 – 09 - £5,000).</p> <p>CHMP activities included in annual workplans (08 – 09) of DOE and DOA.</p> <p>MTB provided £14,500 to cover production of Centre Hills Guide.</p>

<p><b>Output 3.</b> Technical and professional skills to conserve, manage and restore the Centre Hills are strengthened on Montserrat</p>	<p>All key stakeholders participate in 2 training workshops during Y1 &amp; 2 2 staff receive training in UK by Y2 10 local persons involved in fieldwork Y1-Y3 Database established by Y2 Local person employed as project manager or co-manager (Y1 – Y3) Funding applications submitted by Y3</p>	<p>Stakeholders have participated in 14 training workshops that have taken place during the project including public involvement in decision making, GIS, MEAs and strategic planning, environmental education, plant conservation, participatory forest management, project management, ecological monitoring, economic valuation, tour guiding. 4 project partners (including 2 staff) received training in the UK. Database established and handed over to Montserrat May 08. 25 persons have been involved in fieldwork and data collection. Local project manager promoted to full project manager status since Dec 06. 4 successful funding applications to OTEP (Legislative review, Economic Valuation, Species Action Plans, Environmental Regulations).</p>
<p>Activity 3.1 Assess Training and Equipment Needs</p>	<p>Completed Nov 05.</p>	
<p>Activity 3.2 Fundraising training workshop</p>	<p>Workshop not held on Montserrat as project staff attended project development workshop organised by BirdLife Caribbean in Puerto Rico June 06.</p>	
<p>Activity 3.3 Prepare and submit funding proposals</p>	<p>4 successful funding applications to OTEP (Legislative review, Economic Valuation, Species Action Plans, Environmental Regulations). Post project application to Darwin currently under preparation to promote sustainable livelihoods in and around the boundary of the Centre Hills.</p>	
<p>Activity 3.4 Herbarium training in Montserrat</p>	<p>Delivered as component of each plant field based activity (Nov 05, Feb 06, Mar 06, May 06, Sept 06, Aug 07).</p>	
<p>Activity 3.5 Mentor Counterparts</p>	<p>Continued throughout project.</p>	

<p><b>Output 4.</b> Significant progress is made towards establishing the Centre Hills as Montserrat's first Protected Area</p>	<p>Draft legislation approved in principle by key stakeholders at end of Y3</p> <p>Proposed Protected Area contains representative examples of all key habitats and species for which the Centre Hills are important</p>	<p>Draft legislation has undergone extensive consultation and is currently being finalised. The Attorney General's Office on Montserrat has described it as the most consulted piece of legislation on the island.</p> <p>Centre Hills occupy 25% of the Northern Zone. Dry forest is under represented but it was agreed by stakeholders to keep the existing boundary and focus on getting the area designated before opening up discussion.</p>
<p>4.1 Assess existing legislation</p>		<p>Successfully applied to OTEP for additional funding. Recruited legal consultant to undertake review. Legislation pre-volcano so needed rewriting to support current situation on Montserrat and MEAs.</p>
<p>4.2 Work with government of Montserrat to define Protected Areas, regulations, boundaries and management structures</p>		<p>Successfully applied to OTEP for additional funding to develop regulations. To be completed by Mar 09.</p>
<p>4.3 Draft new Protected Area legislation</p>		<p>Draft environmental management legislation (Conservation and Environmental Management Act) currently under finalisation. Due to be presented to Executive Council in August and the House in September for approval.</p>
<p>4.4 Secure agreement of draft Protected Area legislation</p>		<p>Draft environmental management legislation posted on website and circulated twice on Montserrat for comment.</p> <p>Two Executive Council papers produced, one informing on the legislative review and the other relating to correcting the map of the forest boundary.</p>
<p><b>Output 5.</b> Appreciation of the Centre Hills forest and an awareness of its value is increased locally and internationally</p>	<p>No. of tourists visiting Centre Hills increases by 10% during the project</p> <p>&gt; 60% of tourists express satisfaction with visit</p> <p>Final project survey compared to initial project survey shows increased awareness amongst local people</p> <p>Increased local media coverage of the Centre Hills</p>	<p>We can't show that the number of visitors have increased because there was no baseline before the start of the project. There were also a number of factors beyond the project's control including the discontinuation of the ferry service which has meant the number of tourists to the island during the project have decreased. However, during the project 424 exit surveys were collected at the airport. These showed that the natural environment was one of the 3 main reasons persons visited Montserrat and that all trails were being used to varying extents in the Centre Hills. No dissatisfaction was expressed in any of the survey forms.</p> <p>The socio-economic survey showed that 58% of people interviewed knew where the Centre Hills were. 72% and 49% were able to correctly identify the mountain chicken and Montserrat oriole (male) respectively. 91% knew that water came from springs in the Centre Hills. However, the</p>

		<p>survey highlighted that little is understood about protected areas and environmental legislation. The MEEP undertook a similar survey in November 2007, which confirmed the above. In the light of these surveys it was considered too soon to undertake a project exit survey but recommend this is repeated in a couple of years time (identified as an activity in the Centre Hills Management Plan).</p> <p>The media has been very supportive and provided extensive coverage of the project locally and internationally.</p>
5.1 Conduct Awareness Survey		Undertaken as part of socio-economic assessment. Completed Aug 06. Report published Nov 06.
5.2 Conduct Tourist Satisfaction Surveys		Undertaken as part of socio-economic assessment. MTB recognise the need to continue but currently discussing the mechanism.
5.3 Produce project leaflet to promote Centre Hills		1,000 printed August 06.
5.4 Produce project poster to promote Centre Hills		1,000 printed August 06.
5.5 Teachers workshops to prepare educational materials		Workshop held on Montserrat July 07, facilitated by RSPB International Education Adviser.
5.6 Production educational materials/pack		30 education packs printed June 08.
5.7 Prepare a Guide to the Centre Hills		Montserrat Tourist Board have allocated funding in budget. Part written. Due to be published towards the end of 08.
5.8 Submit articles to local media (radio, newspapers)		26 articles in local press. 34 radio interviews on Montserrat.
5.9 Produce annual project newsletter		Newsletter published 2x year (5 in total). DOE to take over as Departmental newsletter.
5.10 Give presentations/papers at conferences		Representations at 10 international conferences.

<p><b>Output 6.</b> Programme of work to manage the Centre Hills is started</p>	<p>Boundary is demarcated on the ground by end of Y3</p> <p>2 significant conservation interventions in the management plan are begun by end of Y3</p> <p>90% of first year of annual workplan is completed on schedule by end of Y3</p>	<p>Existing boundary and land parcels confirmed by EXCO (15th Mar 07).</p> <p>Boundary is cleared annually by contractors to the forestry department once a year. It was last done in October 07 and next clearing is scheduled for October 08.</p> <p>3 significant conservation interventions have started:</p> <ol style="list-style-type: none"> <li>1) SAPs developed for Mountain chicken and galliwasp. Plants about to start (Sept 08)</li> <li>2) Funding is raised to complete regulations to accompany CEMA</li> <li>3) Intensive livestock farming project</li> </ol> <p>The management plan took 6 months longer than planned to complete. As a result by end of June 08 it has only been under implementation for 6 months. About half of the activities identified for Y1 have begun (see Annex 12 for review of progress).</p>
<p>6.1 Handover project/management plan to local project manager</p>		<p>Local counterpart took on project manager status in April 2007.</p>
<p>6.2 Develop programme of work</p>		<p>Some activities in the Centre Hills Management Plan are included in the annual work programmes of the Departments of Environment and Agriculture.</p>
<p>6.3 Demarcate boundary of Centre Hills</p>		<p>Boundary is demarcated and cleared on an annual basis.</p>
<p>6.4 Implement priority activities in the plan</p>		<p>About half the activities for Yr 1 in the Centre Hills Management Plan are under implementation. Some activities have not started (establishment of Environment Centre, Lab etc.) because require significant funding.</p>

## 6.5 Monitor key biodiversity

The Forest Bird Monitoring Programme was revised in 2007, to maximise its effectiveness in future years. Annual monitoring of forest birds, through point-counts at 90 locations distributed across the Centre Hills, has taken place in all years of the project. The long-term database of bird monitoring has been incorporated into a user-friendly database that is managed from Montserrat, and can be queried by non-scientists.

The Mountain Chicken monitoring programme was revised in 2008 to maximise its effectiveness in future years. Annual monitoring of Mountain Chicken has taken place in all years of the project. The long-term database of MC monitoring has been incorporated into a user-friendly spatial database that is managed from Montserrat, and can be queried by non-scientists. [I don't know how many transect routes are covered in the MC survey].

The Biodiversity Assessment demarked and geo-referenced 149 point locations on a grid in the Centre Hills, which have been historically used for bird censuses. From these, a subset of 30 point locations were established, based on a random sample stratified by altitude, on which to base integrated biodiversity monitoring. The Biodiversity Assessment and Rat Research Programme have developed and field-tested protocols for the monitoring of invasive species, plants and herpetofauna. Habitat information has been gathered for each monitoring location, based on the RBGK habitat map and a Digital Elevation Model. This preparatory work makes it straightforward to conduct an integrated biodiversity monitoring programme in the Centre Hills, which maximises the value of the data by allowing different components of the biota to be related to one another, to physical and environmental factors, and to pressures such as invasive species abundance.



## **Annex 2** Project's final logframe, including criteria and indicators

As for Annex 1.

## 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	5%	<ul style="list-style-type: none"> <li>The Centre Hills are integral to economic development on Montserrat (tourism and water) so contributed to the development of the Montserrat Sustainable Development Plan.</li> </ul>
7. Identification and Monitoring	15%	<ul style="list-style-type: none"> <li>Biological assessment undertaken to identify and establish baseline for key species and habitats within the Centre Hills</li> <li>Protocols developed to monitor globally threatened species (Oriole, Forest Thrush, Galliwasp, Mountain chicken)</li> <li>Research undertaken on impacts of rats, a major threat to biodiversity</li> <li>Databases for key species established at the Department of Environment and GIS unit to maintain and organise data</li> </ul>
8. In-situ Conservation	50%	<ul style="list-style-type: none"> <li>Development of new legislation (Conservation and Environment Management Act) with guidelines for selection and management of protected areas</li> <li>Significant progress made towards the establishment of the Centre Hills as a National Park</li> <li>Preparation of management plan for the Centre Hills that promotes protection of habitats; addresses the management of areas on the boundary; restores degraded ecosystems and recovery of threatened species; controls spread of alien species and ensures compatibility between sustainable use of resources and their conservation</li> </ul>
10. Sustainable Use of Components of Biological Diversity	10%	<ul style="list-style-type: none"> <li>Results of economic valuation will be used to inform future policy decisions relating to the Centre Hills</li> <li>Centre Hills Management Committee encourages co-operation between stakeholders as it is comprised of representatives from government, civil society and the private sector</li> <li>The Centre Hills are integral to economic development on Montserrat (tourism and water) so contributed to the development of the Montserrat Sustainable Development Plan</li> </ul>
12. Research and Training	5%	<ul style="list-style-type: none"> <li>Ongoing research programme to investigate the impact of rats on native biodiversity within the Centre Hills and explore feasibility of control</li> </ul>
13. Public Education and Awareness	15%	<ul style="list-style-type: none"> <li>Extensive outreach locally through radio, television, newspapers, newsletters, public meetings and consultations, leaflet and posters and general word-of-mouth</li> </ul>

Article No./Title	Project %	Article Description
		<ul style="list-style-type: none"> <li>• Education materials produced for primary schools</li> <li>• Awareness raised regionally and internationally through the project website, electronic discussion groups and presentations at conferences, workshops and meetings</li> </ul>
Total %	100%	

## Annex 4 Standard Measures

Code	Description	Totals (plus additional detail as required)
<b>Training Measures</b>		
6a	Number of people receiving other forms of short-term education/training (ie not categories 1-5 above)	<b>25 out of 25</b> completed CM, JG, CF, SM, LM, PM, JD, DD, JB, JM, LA, EL, LR, TA, DH, EF, GG, CJM, GJ, RW, CW, OB, WI, DC, JP
6b	Number of training weeks not leading to formal qualification	<b>67.4 out of 23</b> weeks completed <ul style="list-style-type: none"> <li>- LM, JD, JB, JM, LA each received 0.2 week (DWCT Jun 05) = 1 week</li> <li>- CF received 1 week (SCSCB Aug 05)</li> <li>- JD received 1 week (SCSCB Aug 05)</li> <li>- CM received 3 weeks (orientation, BVI Sep 05)</li> <li>- CF received 1 week (ANU Dec 05)</li> <li>- JG received 1 week (ANU Dec 05)</li> <li>- CF received 3 weeks (Kew Nov 05)</li> <li>- JG received 3 weeks (Kew Nov 05)</li> <li>- SM received 1 week (Kew Nov 05)</li> <li>- SM received 2 week (ProjMgt Dec 05)</li> <li>- CF received 1 week (Geoff Jan 06)</li> <li>- JG received 1 week (Geoff Jan 06)</li> <li>- SM received 1 week (Geoff Jan 06)</li> <li>- CM received 0.33 week (GIS Feb 06)</li> <li>- DD received 0.33 week (GIS Feb 06)</li> <li>- SM received 0.33 week (GIS Feb 06)</li> <li>- JG CF each received 0.4 week (Wetlands Apr 06)</li> <li>- SM, PM, DH each received 1 week (Wetlands Apr 06)</li> <li>- SM, JG, CF each received 1 week (Geoff Apr 06)</li> <li>- CM, SM, PM, LM each received 1 week (GSPC May 06)</li> <li>- JG, CF each received 2 weeks (Kew May 06)</li> <li>- SM received 0.2 week (Kew May 06)</li> <li>- CM SM each received 1 week (BirdLife June 06)</li> <li>- CM, SM, CF, JG, LM, JB, JD received 0.2 weeks (CANARI stakeholder ID workshop July 06) = 1.4 weeks</li> <li>- JG, LM received 0.6 weeks (PFM workshp Dominica Jul 06) = 1.2 weeks</li> <li>- EL received 2.2 week (CHP field work Aug 06)</li> <li>- CF received 4 weeks (GIS boundary/trail Aug 06)</li> <li>- JG received 0.8 week (GIS</li> </ul>

Code	Description	Totals (plus additional detail as required)
		boundary/trail Aug 06) – TA received 0.6 weeks (GIS boundary/trail Aug 06) – CJM received 0.4 weeks (GIS boundary/trail Aug 06) – LR received 1.2 weeks (GIS boundary/trail Aug 06) – JD received 0.2 weeks (GIS boundary/trail Aug 06) – CF received 1 week of (Kew Sept 06) – CF and JG received 1 week (Geoff Sep 06) – CF, SM, EF, JD each received 1 week (UKOTCF Oct 06) – CF, SM received 1 week (RSPB and Kew Oct 06) – CW, RW received 1 week training on survey techniques from CM /CHP Jan 2006 – JP, WI, DC,OB received 1 week training in public survey administration from EVP consultants Nov 2007 – CF, JG received 1 week training (RSPB GH FEB 08) – CF, JG received 1 week (Durrell March 2008) – SM, received 1 week training RE: management plan dev (March 08) – SM, GG, CJM, WT, received .30 weeks training (EVP March 08) = 1.2 weeks
7	Number of types of training materials produced for use by host country(s)	1 Monitoring Protocol (March 06) 1 Project leaflet (July 06) 1 Project poster to promote the Centre Hills (July 06) 1 Educational materials pack (Jun 08)
<b>Research Measures</b>		
8	Number of weeks spent by UK project staff on project work in host country(s)	<b>233.5 TOTAL</b> Geoff Hilton = 27 out of 27 weeks Sarah Sanders = 15 out of 15 weeks RSPB GIS Expert = 4 weeks RSPB EE Expert = 3 weeks RSPB MP Expert = 2 weeks Colin Clubbe = 11 out of 10 weeks Martin Hamilton = 22.5 weeks Kew GIS Expert = 4 weeks Project Manager = 96 out of 77 weeks Durrell Experts = 49 out of 45 weeks
9	Number of species/habitat management plans (or action plans) produced for Governments, public authorities or other implementing agencies in the host country (s)	1 Management plan (June 08)
10	Number of formal documents produced to assist work related to species identification,	<b>0</b> Guide to the Centre Hills Agreed with Darwin in Oct 07 that the

Code	Description	Totals (plus additional detail as required)
	classification and recording.	project would be unable to deliver this output in the current timeframe. Now planned for 2009.
11a	Number of papers published or accepted for publication in peer reviewed journals	<p><b>4</b></p> <p>Marske, KA, Ivie, MA &amp; Hilton, GM (in press). Effects of volcanic ash on the forest canopy insects of Montserrat, West Indies. <i>Environmental Entomology</i> <b>36</b>; 817-825.</p> <p>Dalsgaard, B, Hilton, GM, Gray, GAL, Aymer, L, Boatswain, J, Daley, J, Fenton, C, Martin, J, Martin, L, Murrain, P, Arendt, WJ, Gibbons, DW, Olesen, JM (2007). Impacts of a volcanic eruption on the forest bird community of Montserrat, Lesser Antilles. <i>Ibis</i> 149; 298-312.</p> <p>Young, R.P. (ed.) (2008). <i>A Biodiversity Assessment of the Centre Hills, Montserrat</i>. Durrell Conservation Monograph No. 1. Durrell Wildlife Conservation Trust, Jersey, Channel Islands.</p> <p>Ogrodowczyk, A. et al (2006). Recent observations of the Montserrat galliwasp. <i>Herpetological Bulletin</i>, No.98</p>
11b	Number of papers published or accepted for publication elsewhere	<p><b>2</b></p> <p>Report on Socio-Economic Assessment</p> <p>Economic Valuation</p>
12a	Number of computer-based databases established (containing species/generic information) and handed over to host country	<p><b>1</b> computer database established and handed over in May 08</p> <p><b>1</b> plants of Montserrat specimen database established November 05</p>
13a	Number of species reference collections established and handed over to host country(s)	<p><b>1</b> plant herbarium reference collection established November 05. It is held at Kew for the time being as no appropriate facilities available in Montserrat at present.</p>
<b>Dissemination Measures</b>		
14b	Number of conferences/seminars/ workshops attended at which findings from Darwin project work will be presented/ disseminated.	<p><b>10 out of 2</b> representations at international conferences</p> <ul style="list-style-type: none"> <li>- SCSCB (CF, JD) in July 06</li> <li>- BirdLife Caribbean in Puerto Rico June 06 (CM, SM)</li> <li>- CANARI/PFM in Dominica July 06 (LM, JG)</li> <li>- GSPC workshop (SM, CC, JD, PM,</li> </ul>

Code	Description	Totals (plus additional detail as required)
		LM, CM) May 2006 – Wetlands workshop SCSCB April 2006 (SM, CF, JG, PM, LM, JB, JD ) – UKOTCF October 2006 (SM, CF, JD, EF) – JG LM Forestry workshop Dominica – JG LM SCSCB conference Puerto Rico – GG SM participatory forest management workshop Trinidad August 2007 – GG,SM (OT's Caribbean) valuation workshop October 2007
15a	Number of national press releases or publicity articles in host country(s)	<b>26 out of 6</b> completed 1. Montserrat Reporter, June 10, 2005 2. Montserrat Reporter, August 26, 2005 3. Montserrat Reporter, October 7, 2005 4. Montserrat Reporter, November 18, 2005 5. The Montserrat Newsletter, Sept/Oct 2005 6. Cable TV – news spot, January 12, 2006 7. Montserrat Reporter (galliwasp), January 27, 2006 8. Montserrat Reporter (ecol assmt), January 27, 2006 9. Montserrat Reporter (OTEP), March 10, 2006 10. Montserrat Reporter (GSPC), May 06 11. Montserrat Reporter (CANARI) stakeholders, July 06 12. Montserrat National Trust Newsletter about the CHP Jul 06 13. Montserrat Reporter (public consultations), August 18, 2006 14. Montserrat Reporter (planning workshop), September 15, 2006 15. Montserrat Reporter (Kew process), September 22, 06 16. The Montserrat Newsletter, Sept/Oct 2006 17. Montserrat Reporter (publishing of vision statement), September 22, 2006 18. Montserrat Reporter (publishing vision statement), Oct 6 06 19. Montserrat Reporter (rats and ecosystems), 20. Montserrat Reporter (stakeholder engagement), November 23, 2006 21. Montserrat Reporter (EVP/OTEP) project launch May 2007 22. Montserrat Reporter Aug 3 2007 RE: Centre hills as National Park 23. Montserrat Reporter Galliwasp

Code	Description	Totals (plus additional detail as required)
		article April 4 <sup>th</sup> 2008 24. Government of Montserrat budget speech 2008 March 25 <sup>th</sup> 25. Montserrat News letter March April 08 RE;CHP and Royal visit 26. Montserrat Reporter story on EVP workshop March 08 and June 08 workshop June 6 <sup>th</sup> 08
15c	Number of national press releases or publicity articles in UK	<b>9 out of 3</b> completed 1. BirdLife Caribbean newsletter, May 2005 2. BirdLife Caribbean newsletter, December 2005 3. Kew Scientist, October 2005 4. Kew Gardens brochure, summer 2006 5. Kew Scientist, Summer 2006 6. Birdlife Caribbean newsletter, May 2006 7. UKOTA newsletter, Winter 2006 8. Article in Kew Magazine 2007 9. RSPB/Darwin websites HRH Montserrat visit March 2008
16a	Number of issues of newsletters produced in the host country(s)	<b>5 out of 3</b> completed 1. December 2005 newsletter produced 2. June 2006 newsletter produced 3. December 2006 newsletter produced 4. July 2007 news letter produced 5. December 2007 news letter produced
16b	Estimated circulation of each newsletter in the host country(s)	<b>3750 out of 1500</b> circulated – 600 print copies circulated January 06 – 50 circulated electronically January 06 – 1400 print copies circulated June 06 – 50 circulated electronically June 06 – 850 print copies circulated Dec 06 – 50 circulated electronically Dec 06 – Posted on website Dec 06 – 750 print copies circulated July 07 – 80 circulated electronically – Posted on website July 07
16c	Estimated circulation of each newsletter in the UK	<b>1565 out of 50</b> circulated – Hard copy in UK (300, including UKOTCF members) Jan 06 – Electronic copy from CHP (75) Jan 06 – BirdLife Caribbean egroup (150) Jan 06 – BirdLife partners (30) Jan 06 – UK distribution (300, including RSPB staff, UKOTCF, groups via Janice Panton) June 06 – Electronic copy from CHP (25) June 06 – BirdLife Caribbean egroup (150)



Code	Description	Totals (plus additional detail as required)
		June 06 – BirdLife partners (30) June 06 – UK distribution (300, including RSPB staff, UKOTCF, groups via Janice Panton) Dec 06 – Electronic copy from CHP (25) Dec 06 – BirdLife Caribbean egroup (150) Dec 06 – BirdLife partners (30) Dec 06
17a	Number of dissemination networks established	<b>1</b> E-group established November 2005 <a href="mailto:montserratcentrehills@yahoo.com">montserratcentrehills@yahoo.com</a> 18 members
19a	Number of national radio interviews/features in host country(s)	<b>34 out of 6</b> completed 1. Studio interview, September 23, 2005 (SS, CM, CG) 2. Rose Willock show, November 19, 2005 (CC, CG) 3. Studio interview, November 24, 2005 (CM, MH, SE) 4. Rose Willock show, December 10, 2005 (CM, LM, JD, JG) 5. Studio interview, January 18, 2006 (SM, GH) 6. Studio interview, February 1, 2006 (JD, AO, LM) 7. Studio interview, February 3, 2006 (CC, EF, SH, JS) 8. Call-in programme with St. Thomas radio station, March 4, 2006 (CM) 9. Interview at MNT, early March (EF, SM, MH, SB, SR) 10. Studio interview, early March 2006 (MH, SR, SB) 11. News interview, March 14, 2006 (CM, SS, SM) 12. Workshop coverage week of May 14 – 19 (CC, SM) 13. News interview, June 2006 (SM, LM) 14. News interview, CANARI workshop July 13 (CM, SM) 15. Saturday morning show (CM, SM) August 19, 2006 16. The Peoples Show (CC, GH, RY) September 13, 2006 17. Workshop coverage week of Sept 11-15, 2006 (various from opening ceremony) 18. Montserrat on the Move – sharing vision statement (CW, GG, JM), Oct 12, 2006 19. News item on CHMC workshop Nov 23 06 (SM, NL) 20. News item on Trail hike Jan 07 (SM, CF, JG) 21. Studio interview with JNCC (SM, Tara Pelembe) – Feb 27, 07 22. Radio Call in RE: legal draft

Code	Description	Totals (plus additional detail as required)
		(CTA,GG, CB,SM,ES)-May 24 07 23. Radio interview CM leaving and synopsis Sept 18 07 24. Radio interview with Luke Brander and Desiree Imerzeel re; economic valuation project 25. Radio interview re: HRH visit March 08 26. Radio interview re : status of draft CEMA legislation Feb 08 27. Radio interview Sarah Sanders RE; Management Plan March 08 28. Radio interview Pieter Van Bukering EVP project March 08 29. Radio interview Nicole Leotaud CANARI March 08 30. Radio interview Nicole Leotaud CANARI EVP June 12 <sup>th</sup> 08 31. Radio interview Sarah Sanders CANARI EVP June 12 <sup>th</sup> 08 32. Radio interview Lloyd CANARI EVP June 12 <sup>th</sup> 08 33. Radio interview Stephen Mendes June 11 <sup>th</sup> & 12 <sup>th</sup> 08 EVP 34. Radio interview Albert Daley June 11 <sup>th</sup> Development unit re EVP
<b>Physical Measures</b>		
20	Estimated value (£s) of physical assets handed over to host country(s)	<b>£23,793.77</b> worth of computers, vehicle, trail counters, equipment etc. handed over
22	Number of permanent field plots established	<b>30</b> points were used in the Biodiversity Assessment and could form the basis for future monitoring of many taxa
23	Value of additional resources raised for project	RSPB – <b>£71,555.85</b> out of £87,003 DWCT - <b>£109,042</b> out of £106,028 Kew – <b>£255,300</b> out of 10,549 MNT - <b>£1,500</b> out of £1,500 (staff time) MAHLE - <b>£44,010</b> out of £44,010 (staff time) MTB - <b>£14,500</b> out of £11,000 (support publication of the Guide to the Centre Hills)

## Annex 5 Publications

Type	Detail	Publishers	Available from	Cost £
Newsletter	Montserrat Centre Hills Project Newsletter, Centre Hills Project, December 2005, June 2006, December 2006, June 2007, December 2007	CHP, Montserrat	<a href="http://www.malhe.gov.ms/centrehills">www.malhe.gov.ms/centrehills</a>	No cost
TV miniseries	A Year at Kew miniseries, 2007	BBC Television, UK	c/o Colin Clubbe, RBG Kew,	N/A
Book	The World of Kew, by Carolyn Fry, 2006	BBC Books, UK	<a href="http://www.amazon.co.uk">www.amazon.co.uk</a>	£13
Leaflet	Montserrat Centre Hills Project, RSPB, 2006	RSPB, Bedfordshire, UK	DOE, Montserrat malhe@gov.ms	No cost
Leaflet	Trail map, 2006	Montserrat Tourist Board	Montserrat Tourist Board, Farara Plaza, Brades, Montserrat	£2
Magazine article	Clubbe, C. & Hamilton, M. "Hotspot Challenge", Kew Magazine, Summer 2006	Kew Publishing	c/o Colin Clubbe, RBG Kew,	£3.75
Booklet	Global Strategy: Kew and the Global Strategy for Plant Conservation	Kew Publishing	c/o Colin Clubbe, RBG Kew,	No cost
Report	Stakeholder analysis, 2006	CHP, Montserrat	DOE, Montserrat malhe@gov.ms	No cost
Report	Participation strategy, by Caribbean Natural Resources Institute, 2006	CHP, Montserrat	DOE, Montserrat malhe@gov.ms	No cost
Report	Young, R.P. (ed.) (2008). <i>A Biodiversity Assessment of the Centre Hills, Montserrat</i> . Durrell Conservation Monograph No. 1. Durrell Wildlife Conservation Trust, Jersey, Channel Islands.	DWCT, Jersey, Channel Islands	<a href="http://www.durrell.org/library/Document/Durrell_Cons_Monograph_1_Full_Report.pdf">http://www.durrell.org/library/Document/Durrell_Cons_Monograph_1_Full_Report.pdf</a>	No cost
Report	Socioeconomic Assessment Report, by Carole McCauley and Stephen Mendes, 2006	CHP, Montserrat	<a href="http://www.malhe.gov.ms/centrehills">www.malhe.gov.ms/centrehills</a>	No cost
Report	Centre Hills Management Plan, 2008	RSPB, Bedfordshire, UK	DOE, Montserrat	£5 or XCD \$ 25

Report	Workshop report: Planning for the Management of the Centre Hills, Centre Hills Project, 2006	CHP, Montserrat	<a href="http://www.malhe.gov.ms/centrehills">www.malhe.gov.ms/centrehills</a>	No cost
Report	Economic Valuation of the Centre Hills, Montserrat, van Beukering et al, 2008	RSPB, Bedfordshire, UK	DOE, Montserrat malhe@gov.ms	No cost
Report	Montserrat Policy Development, Nicole Leotaud, CANARI, 2007	CHP, Montserrat	DOE, Montserrat malhe@gov.ms	No Cost
Report	Policy Communication Strategy, Nicole Leotaud, CANARI, 2008	RSPB, Bedfordshire, UK	DOE, Montserrat malhe@gov.ms	No Cost
Legislation	Draft environmental bill, by Christine Toppin-Allahar, 2007	CHP, Montserrat	DOE, Montserrat malhe@gov.ms	No cost
Scientific Journal article	"Recent observations of the Montserrat galliwasp", by A. Ogradowczyk et al., in <i>Herpetological Bulletin</i> , No. 98	Zoological Society of London, UK	<a href="http://www.herplit.com/contents/BHSBull.html">http://www.herplit.com/contents/BHSBull.html</a>	No cost
Scientific Journal article	"Impacts of a volcanic eruption on the forest bird community of Montserrat, Lesser Antilles", by B. Dalsgaard et al., in <i>Ibis</i> , No. 149	British Ornithologists Union, UK	<a href="http://www.blackwell-synergy.com/doi/full/10.1111/j.1474-919X.2006.00631.x">http://www.blackwell-synergy.com/doi/full/10.1111/j.1474-919X.2006.00631.x</a>	Free copy by emailing geoff.hilton@rspb.org.uk
Scientific Journal article	Marske, KA, Ivie, MA & Hilton, GM (2007). Effects of volcanic ash on the forest canopy insects of Montserrat, West Indies. <i>Environmental Entomology</i> <b>36</b> ; 817-825	Entomological Society of America	<a href="http://www.blackwell-synergy.com/doi/full/10.1111/j.1474-919X.2006.00631.x">http://www.blackwell-synergy.com/doi/full/10.1111/j.1474-919X.2006.00631.x</a>	Free copy by emailing geoff.hilton@rspb.org.uk

## Annex 6: Darwin Contacts

Ref No	14-027
Project Title	Enabling the people of Montserrat to conserve the Centre Hills
<b>UK Leader Details</b>	
Name	Sarah Sanders
Role within Darwin Project	Oversee project from the UK. Provide support to local project staff.
Address	RSPB, The Lodge, Sandy, Bedfordshire, SG19 2DL
Phone	
Fax	
Email	
<b>Other UK Contact</b>	
Name	Dr Geoff Hilton
Role within Darwin Project	Led on research into ecological processes
Address	RSPB, The Lodge, Sandy, Bedfordshire, SG19 2DL
Phone	
Fax	
Email	
<b>Partner 1</b>	
Name	Gerard Gray
Organisation	Director, Department of Environment
Role within Darwin Project	Contribute to development and lead on implementation of Centre Hills Management Plan.
Address	Ministry of Agriculture, Land, Housing and the Environment, P.O.Box 272, Brades, Montserrat
Fax	
Email	
Name	Stephen Mendes
Organisation	Environmental Education Officer, Department of Environment
Role within Darwin Project	Project Manager
Address	Ministry of Agriculture, Land, Housing and the Environment, P.O.Box 272, Brades, Montserrat
Fax	
Email	
<b>Partner 2</b>	
Name	Dr Colin Clubbe and Martin Hamilton
Organisation	Royal Botanic Gardens Kew
Role within Darwin Project	Botanical Inventory, Training & Support

Address	The Herbarium, RBG Kew, Richmond, Surrey, TW9 3AE, UK
Fax	+44(0)2083325278
Email	
<b>Partner 3</b>	
Name	Dr Richard Young
Organisation	Durrell Wildlife Conservation Trust
Role within Darwin Project	Led the biodiversity assessment.
Address	Durrell Wildlife Conservation Trust, LES AUGRES MANOR, TRINITY, JERSEY, CHANNEL ISLANDS, JE3 5BP
Fax	
Email	
<b>Partner 4</b>	
Name	Rosetta West
Organisation	Montserrat Tourist Board
Role within Darwin Project	Co-ordinated MTB's input to project.
Address	7 Farara Plaza, Buildings B&C P.O. Box 7, Brades, Montserrat, WI
Fax	
Email	
<b>Partner 5</b>	
Name	Eudora Fergus
Organisation	Montserrat National Trust
Role within Darwin Project	Administrative support to project.
Address	P.O.Box 393, Olveston, Montserrat
Fax	
Email	

Annex 7	Maps
Annex 8	Memorandum of Collaboration
Annex 9	Centre Hills Management Committee Terms of Reference
Annex 10	Economic Valuation Study
Annex 11	Centre Hills Management Plan (2008 – 2010)
Annex 12	Review of Management Plan progress (June 2008)
Annex 13	List of trainings, meetings etc.
Annex 14	Press Articles
Annex 15	Project Leaflet and Newsletters
Annex 16	Education Pack
Annex 17	Biological Assessment
Annex 18	Socio-economic Assessment
Annex 19	Update on rodent research
Annex 20	Project partners/collaborators
Annex 21	Final draft (with comments) of the Conservation and Environment Management Act