



*Development of a National Strategy for Sustainable Wildlife Use
for the Commonwealth of Dominica*

Annual Report 2002-2003

*Prepared by Fauna & Flora International,
With inputs from the Forestry, Wildlife & Parks Division
of the Government of Dominica*

Darwin Initiative for the Survival of Species

Annual Report

1. Darwin Project Information

Project title	<i>Development of a National Strategy for Sustainable Wildlife Use for the Commonwealth of Dominica</i>
Country(ies)	<i>Commonwealth of Dominica</i>
Contractor	<i>Fauna & Flora International</i>
Project Reference No.	<i>162/10/010</i>
Grant Value	<i>£99,754</i>
Start/Finishing dates	<i>May 2001 - March 2004</i>
Reporting period	<i>April 2002 - March 2003</i>

2. Project Background

Dominica is a small, rugged, heavily forested island in the Eastern Caribbean, dubbed the "Nature Isle" for its spectacular scenery and relatively pristine environment. It is poor in comparison to its neighbours, and traditional livelihoods are closely linked to natural resources. A number of wildlife and plant species are exploited for food and other purposes, some on a small-scale commercial basis, but there is also evidence of substantial illegal exports of some species. This project was designed to address the concern that levels of exploitation, particularly of wildlife, might be unsustainable, and to develop strategies to rectify this. Sustainable use of wildlife is an area which Dominican conservationists feel is important to develop, both to optimize the economic value to local communities and to ensure it does not lead to irreversible declines in resource species. In addition, opportunities for alternative income generation, for example through bush-meat ranching and eco-tourism would be explored.

A key element of this project is provision of training and resources to boost the capacity of the Forestry and Wildlife Division, Dominica, to monitor key resource species, in particular agouti, black crab, red-necked pigeon and mountain chicken (the world's second-largest species of frog). These authorities requested assistance with assessment of wildlife and its use and with the development of conservation recommendations and monitoring protocols as a national priority.

3. Project Objectives

The **purpose of this project** is to reduce direct threats of over-exploitation facing the wildlife of Dominica, through the participatory development of a National Strategy for Sustainable Wildlife Use, and through building of the in-country capacity for its long-term implementation.

The anticipated **outputs from this project** include:

1. Improved baseline level of social information on key resource species use ;
2. Improved understanding of the biology and status of key resource species;
3. Conservation strategies developed for selected key species, based on information on their ecology and predicted sustainable off-take;
4. Capacity built within FWD and other key agencies;
5. Improved public awareness of the vulnerability of natural resources amongst all stakeholder groups, including key decision makers, local communities and tourists; and,
6. A national strategy for sustainable wildlife use developed in a participatory manner.

These objectives and generalised operational plan remain as indicated within the application.

4. Progress

The project had its origins in discussions between FWD and FFI held as early as 1995 about the need to identify patterns of wildlife use on the island, and in 1998 FWD initiated their own interview survey of hunters. An FFI visit to Dominica in early 2000 enabled collaborative planning for the project, which was submitted to the Darwin Initiative in October 2000 and therefore started in May 2001. Between June 2001 and April 2002 an MoU between FFI and FWD was signed, and the ecological fieldwork component of the project was initiated. This consisted of two training workshops, one on GPS and mapping skills and one on field survey and monitoring skills, followed by the establishment of 15 transects 1 km long to monitor populations of Agouti and Red-necked Pigeon and 11 transects 250 m long to monitor Black Crab populations in different parts of the island. A social assessment specialist undertook a training workshop in February 2002 and the foresters participating then undertook a complete island-wide survey using techniques that they had learnt, a process completed by April 2002. A public awareness planning workshop was held in April 2002.

The majority of the proposed activities from the last agreed baseline timetable for May 2002 - March 2003 have been completed (see list below), but there has been some slippage in timing, due to personnel changes and constraints of staff / consultant availability. Major project activities undertaken are listed below in chronological order.

- A Dominican consultant was engaged from April to June to analyse the data collected in the participatory stakeholder assessment of community hunting, and his report has been received. A contract extension was given until August.
- Further equipment has been delivered to the FWD. The major item was a project vehicle, a Nissan double cab, 4WD pick up, purchased for US\$16,011 after agreement with Sylvia Smith of the Darwin Initiative about re-allocation of initial budget lines and received in June 2002. Additional field equipment provided included GPSs, waterproof jackets, a soil testing kit, 4 clinometers; hygrometers, pesometers, callipers etc. Office equipment included printer cartridges and provision of an office intranet system to link FWD's six existing computers together.
- An FFI herpetologist gave a two-week training course to FWD personnel in July / August on wildlife census techniques, with special emphasis on surveying the threatened Mountain Chicken (a species of frog). Nine transects for monitoring Mt Chicken populations were set up. Two interviews were recorded for broadcast on both of the national TV networks.
- An FFI field biologist conducted on-the-job training of FWD personnel in surveys and data collection in August and September, with emphasis on establishing and monitoring transects for Agouti, Red-necked Pigeon and Black Crabs. An Excel database was created for recording and analysing transect data, and FWD personnel were trained in data entry and report creation.
- The new FFI Project Leader (see below) visited Dominica in September for project handover and induction and delivered a half-day "Introduction to Data Analysis" workshop to 15 FWD personnel.
- A five-day wildlife-ranching study tour to Trinidad was undertaken by two FWD personnel in December 2002. A trip report is available.
- An FFI botanist / the FFI project leader visited in January 2003 to discuss links between the FWD and the FFI / WCMC Global Trees Campaign and identify possible joint projects on endangered tree species. A six-month work programme and provisional list of public awareness activities was developed. An interview about the Darwin project was videoed for broadcasting on Dominican

television. Field visits to potential tree project sites and to selected wildlife monitoring transects were made. A quality-control review of the wildlife data collected was conducted with FWD.

- FWD completed 12 months of monitoring wildlife transects (Agouti / Red-necked Pigeon and separate Black Crab transects) at the end of March 2003. In response to the reported mass die-off of Mt Chickens, the frequency of monitoring of the established Mt Chicken transects was increased from quarterly to monthly.
- In early March FWD organised a suite of public awareness activities linked to Dominica's annual Carnival. A high school pageant, two carnival floats and a youth group were sponsored to participate in Carnival activities in four different towns including the capital, Roseau, to publicize the theme of sustainable exploitation of wildlife.
- The FFI project leader visited in March 2003 to conduct one-on-one data analysis of the transect data with the FWD data compiler, observe and document the Carnival public awareness activities, and establish relations with the new Acting Director of FWD.
- The FFI project leader arranged for analysis in the UK of samples from diseased Mt Chickens, and initiated DNA testing to establish the distinctiveness (or otherwise) of the Dominican and Montserratian populations.
- A British UEA MSc student started a three-month field investigation into factors affecting the distribution and abundance of the Mt Chicken population, under the auspices of FWD / FFI and linked to the Darwin project. She will be in Dominica from 27th March to 17th June 2003.

All research during the last year has been carried out with the aid of FWD field staff, who have received appropriate training via specifically-designed workshops and through practical "on-the-job" guidance. A total of 15 staff - in effect the entire complement of FWD's field staff - have received training.

The ecological monitoring work has been based on the establishment of fixed transects cut in straight lines through the dense forest in various parts of the island. Each month transects are visited by FWD staff, slowly walked and data recorded on standard data sheets developed for the project. Data is compiled by a member of FWD into the prepared Excel spreadsheet databases. Initial analysis of the first year's worth of wildlife data collected was jointly undertaken by FFI / FWD, whilst analysis of the socio-economic assessment data on hunting was carried out by a local Dominican consultant recommended by FWD.

Communication between FFI and FWD was hampered in 2002 by significant difficulties with email access. This appears to have been resolved in 2003 following the computer networking of the FWD office. There was also a failure to realise that the transfer of money from UK to Dominica to finance activities takes a significant time, leading on occasion to the late arrival of funds which caused a few minor problems. Dominica as a whole is facing a period of sustained government cutbacks, which means that FWD has had to make significant reductions in staffing, overtime and use of government vehicles outside of normal office hours.

The project design has remained essentially unchanged over the past year. The one major budgetary change has been the reallocation of vehicle hire costs for the three years of the project to the outright purchase of a 4WD project vehicle, delivered in June 2002. The ownership of this will be transferred to FWD at the end of the project. Given the changes in personnel, it is apparent that more frequent visits by the FFI project leader are necessary than initially planned to ensure smooth co-ordination and implementation of activities.

The major activities scheduled for the next reporting period (April 2003 - March 2004) are listed below. Concurrently there will be a programme of public awareness activities which FWD is taking the lead in organizing. These will include national press releases and national TV and radio interviews in Dominica, preparation of flyers / billboards etc. and a workshop on wildlife laws for law enforcement officers.

<i>Date</i>	<i>Activity</i>
<i>April / May / June 2003</i>	<i>Fieldwork on Mt Chicken distribution and abundance (MSc student from UEA, UK) continued and concluded</i>
<i>June 2003</i>	<i>Training course for 15 senior FWD / Min of Ag personnel on development of funding proposals for international donors (3 days)</i>
<i>July 2003</i>	<i>Stakeholder forum established, including wildlife collectors and women's groups</i>
<i>August 2003</i>	<i>Determination of distribution and abundance of key resource species concluded.</i>
<i>September 2003</i>	<i>Participatory assessment with stakeholders concluded. Launch of Global Trees Campaign project in Dominica</i>
<i>October 2003</i>	<i>Workshop to develop sustainable management guidelines. Training course for 10 FWD personnel on strategic planning for conservation.</i>
<i>November 2003</i>	
<i>December 2003</i>	<i>Training course for 15 FWD personnel on rural business development (3 days)</i>
<i>January 2004</i>	<i>National sustainable use strategy developed for review. Paper submitted / published on ecological research</i>
<i>February 2004</i>	
<i>March 2004</i>	<i>National sustainable use strategy disseminated and publicized</i>
<i>April 2004</i>	<i>Final reporting and close of project</i>

5. Partnerships

Collaboration has generally been extremely good, although due to work loads and travel schedules of senior staff of both FFI and FWD communication response times are often slow. A slight difficulty encountered has been the rapid turnover of senior project staff, leading to lack of continuity and understanding of the project. From September 2002 to January 2003, David Williams was replaced as Acting Director of FWD by a new Director, Mark John. Mark has now left FWD and has in turn been replaced by Eric Hippolyte as a new Acting Director. Meanwhile, in May 2002 Dr Chris Magin replaced Dr Abigail Entwistle as FFI's project manager. Another challenge is that due to the small number of staff in FWD and their heavy workload, many can be occupied with other urgent tasks during FFI visits and are therefore unable to work with FFI staff / consultants, despite advance notice of visits.

In January 2003 FWD requested FFI's urgent assistance to determine the cause of a mortality event affecting the Mountain Chicken, a species which although currently unlisted we believe probably merits at least "Endangered" IUCN Red List status, and potentially a CITES Appendix listing. FFI responded immediately, and have established two new collaborative links: one between the Ministry of Agriculture's veterinary department on Dominica and Dr Andrew Cunningham of the Zoological Society of London, who is also chair of the Disease Section of IUCN's Species Survival Commission's DAPTF (Declining Amphibian Population Task Force); and between FWD and Kevin Buley, the Herpetological Director of Jersey Wildlife Preservation Trust. Simultaneously we are investigating the distinctiveness of the Dominican and Montserratian populations through DNA analysis with the aid of Professor Roger Thorpe and Anita Malhotra at Bangor University. Results of both these investigations are still pending. In addition, believing that the conservation situation of the Mountain Chicken is critical, FFI / FWD

arranged to host the placement of an MSc student, Sarah McIntyre, from the University of East Anglia, Norwich, in Dominica from March to May 2003 to investigate the decline of the frog. The project has also made initial contact with a UK-based organisation called "Challenges Worldwide" which recruits volunteers for 3/6/9 months to plug people resource gaps (skill specific or general) and provide training for local people in worthwhile social and environmental development work and in 2003 / 2004 will explore options for placements with FWD.

6. Impact and Sustainability

The project has already attracted substantial media interest within Dominica, and around half a dozen TV interviews have been broadcast on the regular "Environment Corner" slot allocated to the FWD on the government stations. The Carnival activities sponsored under this project would have been seen by a large proportion of Dominica's population, both at the time and on TV broadcasts, disseminating messages about the sustainable use of wildlife.

The public awareness strategy has already identified key messages about wildlife use, and the project itself, along with appropriate mechanisms to deliver these messages to the different key audiences. The media will continue to be used as an important tool to promote the work of the project at a national level.

No separate exit strategy is seen as necessary for this project, as it is designed in such a way as to deliver the skills to enable the FWD to effectively manage the country's wildlife into the future. The information and recommendations from this project will provide direct input to revision of wildlife law, which the FWD then has the remit to implement. The partnerships and participatory approaches developed during this project have been requested by FWD, and they are committed to their future maintenance. Assuming that the recent government cutbacks do not bite too deeply, FWD should be in a position, having acquired the relevant skills, equipment and experience, to continue ecological monitoring after the end of the project.

7. Outputs, Outcomes and Dissemination

Table 1. Project Outputs (According to Standard Output Measures)

Code No.	Quantity	Description
6A	15 Dominicans	Training course for personnel in Mt Chicken monitoring
6B	2 weeks	
8	2 weeks	FFI Herpetologist to give course above
6A	15 Dominicans	Training course for FWD personnel on field surveys and monitoring training
6B	1.5 weeks	
8	1.5 weeks	FFI wildlife ecologist to give course above
6A	1 Dominican	Training course for one FWD person (data compiler) on database creation and maintenance and data analysis
6B	0.5 weeks	
8	4 weeks	FFI project leader - project management / public awareness / data analysis
8	1.5 weeks	FFI botanist - Global Trees Campaign
7	2 manuals developed to meet FWD needs.	Training materials (manuals and/or course notes) produced: Mt Chicken Monitoring; Introduction to Data Analysis
12A	2 databases	Databases of field observations from Black Crab and Agouti / Red-necked Pigeon transects
14A	1	Half day workshop on Data Analysis
18A	3	National TV features in Dominica
20	£10,962	4WD Nissan double-cabin pick-up (US\$ 16,011)
20	£2,253	Additional field equipment provided including GPSs, waterproof jackets, a soil testing kit, 4 clinometers; hygrometers, pesometers, callipers, head torches (£52) etc.
20	£658	Office equipment - office intranet, printer cartridges etc.
23	£2,500	Contribution from Global Trees Campaign to visit by FFI botanist (estimated)
23	£650	Office costs in Dominica. Contribution in kind from FWD (estimated equivalent cost)
23	£4,720	Days worked by FWD staff in Dominica. Contribution in kind from FWD staff (estimated equivalent cost)

Some scheduled outputs have been delayed and will be re-scheduled for 2003 / 2004. In particular, a training course on rural business development has not yet taken place, and a stakeholder forum has not been established. The former has been re-scheduled for later in 2003. It was envisioned that the latter

would take the form of the establishment of some sort of "Hunter's Association" but FWD advise that this is not something that could successfully be imposed from outside, but needs to be a perceived need of the hunters themselves. It may therefore be necessary to conduct a series of regional workshops with hunters to solicit their views and input into the sustainable use strategy.

In addition, in the original plan a number of press releases were to be developed. However such press releases have still not been considered appropriate at this stage of the project. As a government department the FWD already has regular direct access to key media (TV and Radio) and considers that these are the most effective mechanisms for dissemination. Indeed, media coverage (TV and radio) in Dominica has been greater than anticipated. Press releases in the UK have been delayed until some newsworthy progress has been made to report upon, and thus increase the likelihood of uptake in the UK media. However, mention of the project has been included in the FFI newsletter.

Table 2: Publications

Type * (e.g. journals, manual, CDs)	Detail (title, author, year)	Publishers (name, city)	Available from (e.g. contact address, website)	Cost £
Internal Report	Final Report: Social Assessment of Hunting in Dominica 2002. Joey Jno Lewis (2002)	FFI, Cambridge, UK	chris.magin@fauna-flora.org	Free
Manual	Mountain Chicken Monitoring Manual. Jenny Daltry (2002)	FFI, Cambridge, UK	chris.magin@fauna-flora.org	Free
Manual	Introduction to Data Analysis. Chris Magin (2002)	FFI, Cambridge, UK	chris.magin@fauna-flora.org	Free

The outputs of the project this year include a further two training manuals, details above, to assist in biological survey techniques and data analysis and interpretation. Both of these are available from the project leader, as is the social assessment of hunting analysis. Information on the project and the results has been disseminated through the year by the public awareness campaign, which will continue after the end of Darwin funding. The manuals will also allow new staff to be trained in field techniques by current FWD staff.

8. Project Expenditure

Table 3: Project expenditure during the reporting period

Item	Budget (as specified in project proposal) ¹	Expenditure (at 31/03/03)
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Notes

9. Monitoring, Evaluation and Lessons

Skills transfer and capacity building is an important element of this project and its effectiveness will be tracked in a number of ways. Evaluation questionnaires are completed by participants at the end of every training workshop to determine the appropriateness and usefulness of training delivered. In addition, subsequent implementation of the skills delivered within the FWD work plan are tracked by FFI staff to determine effectiveness, and to provide follow-up support where needed. The fact that survey teams are now up and running and collecting biological and social data in an organised and rigorous way, using the methods delivered in the training sessions, indicates the capacity building elements of the project is proving effective.

The data collection will be central in developing the outputs for this project, and quality control on the data collection is ensuring that it is on track and of appropriate standard. The number of infractions of the law will also be tracked by FWD into the future to identify trends and response to this project.

Species monitoring protocols developed under the project, and now being undertaken by FWD staff, will allow changes in wildlife numbers to be tracked into the long term, in order to determine project impact.

10. Author(s) / Date

Dr Chris Magin

30th April 2003

Annex 1. Logframe analysis for project

Project summary	Measurable indicators	Means of verification	Important assumptions
<p>Goal To assist countries rich in biodiversity but poor in resources with the conservation of biological diversity and implementation of the biodiversity convention.</p>	<p>Project assistance provided by Darwin Initiative funding.</p>	<p>Publications acknowledging the impact of the Darwin Initiative project.</p> <p>Time spent in-country by the Darwin funded project.</p>	
<p>Purpose To reduce direct threats of over-exploitation facing the wildlife of Dominica, through the participatory development of a National Strategy for Sustainable Wildlife Use, and building of the in-country capacity for its long-term implementation.</p>	<p>Production of a National Strategy for Dominica.</p> <p>Training of other staff by Darwin trainees from workshops.</p> <p>Long-term sustainability of off-take of key species.</p>	<p>Published National Strategy</p> <p>Evaluation from workshops, and reports from implementation of strategy.</p> <p>Reports from long-term monitoring of resource species.</p>	<p>Political stability and will maintained.</p> <p>Socioeconomic conditions for sustainability continuing to be met.</p>
<p>Outputs</p> <p>1.Improved baseline information on resource species use.</p> <p>2. Improved understanding of the biology and status of key species</p> <p>3. Conservation strategies developed for key species</p> <p>4. Capacity built within FWD and other agencies</p> <p>5. Improved public awareness</p> <p>6. National strategy for sustainable wildlife use developed.</p>	<p>1.Gap analysis on current baseline data completed.</p> <p>2. Initial studies of key species completed.</p> <p>3.Four species conservation strategies completed.</p> <p>4. FWD & other agencies able to implement and sustain project objectives.</p> <p>5. Increased awareness of need for sustainability.</p> <p>6. Publication of national strategy for sustainable wildlife use.</p>	<p>1. Project reporting & project research plan.</p> <p>2. Project publications.</p> <p>3. Project publications.</p> <p>4.Evaluation forms from workshops & departmental progress reports.</p> <p>5. Consumer questionnaires.</p> <p>6. National strategy for sustainable wildlife use for Dominica produced & adopted.</p>	<p>1. Effective reporting regime.</p> <p>2. Ethos of generating wider awareness of the project.</p> <p>3. Ethos of generating wider awareness of the project.</p> <p>4. Access to departmental records.</p> <p>5.Honest responses to questionnaires.</p> <p>6. Political will.</p>

<p>Activities:</p> <p>1.1 Analyse available data</p> <p>1.2 Initial participatory assessments</p>	<p>1.1 8 days FFI; £800</p> <p>1.2 10 days FFI; 30 days FWD; travel; £6,305</p>	<p>1.1 Review document & bibliography</p> <p>1.2 Social report</p>	<p>1.1 Access to relevant publications</p> <p>1.2 Truthful participation from those questioned</p>
<p>2.1 Determine distribution and abundance of key species</p> <p>2.2 Initiate further ecological studies</p> <p>2.3 Review the historical & current sustainability of off-take</p>	<p>2.1 42 days FFI; 125 staff days FWD; travel; equipment; £26,056</p> <p>2.2 50 days FFI; 75 days FWD; travel; £17,495</p> <p>2.3 5 days FFI; 5 days FWD; £1,415</p>	<p>2.1 Survey report and published article.</p> <p>2.2 Research & monitoring strategy produced</p> <p>2.3 Paper on off-take data</p>	<p>2.1 Accuracy and standardisation of data collection</p> <p>2.2 Willingness and training of FWD personnel</p> <p>2.3 Accuracy of past and present data collection</p>
<p>3.1 Produce species specific sustainable management guidelines.</p> <p>3.2 Support the ongoing review of national wildlife legislation.</p>	<p>3.1 20 days FFI; 10 days FWD: £4,640</p> <p>3.2 5 days FFI; 5 days FWD; £1,440</p>	<p>3.1 Published guidelines</p> <p>3.2 Management guidelines incorporated into new legislation</p>	<p>3.1 Adequate planning data available to project</p> <p>3.2 Willingness and time</p>
<p>4.1 Work with FWD counterparts in all phases.</p> <p>4.2 Hold training courses for FWD personnel</p> <p>4.3 Establish a Stakeholder Forum on Sustainable Use.</p>	<p>4.1 200 days FFI; 608 FWD staff days; costs equal to total budget</p> <p>4.2 30 days FFI; 362 FWD staff days; travel; workshop costs; £15,090</p> <p>4.3 10 days FWD; £850 (Project co-ordination, communication and reporting costs: £12,747) (Management and office costs: £9,750)</p>	<p>4.1 Collaborative project reporting</p> <p>4.2 Workbooks and evaluation forms from courses</p> <p>4.3 Minutes of Stakeholder forum meetings.</p>	<p>4.1 Good motivation</p> <p>4.2 Willingness and time</p> <p>4.3 Public interest</p>
<p>5.1 Plan public awareness campaign</p> <p>5.2 Develop a suite of educational materials.</p> <p>5.3 Regularly publicise the project.</p> <p>5.4 Target wildlife collectors and women's groups for regular discussions</p>	<p>5.1 10 FFI days; 10 days FWD: £2,880</p> <p>5.2 14 FFI days; 42 FWD days; travel; printing; £10,791</p> <p>5.3 5 FFI days; 21 FWD days; £2,615</p> <p>5.4 20 days FWD; travel; £1700</p>	<p>5.1 Public awareness plan completed.</p> <p>5.2 Educational materials</p> <p>5.3 Media articles</p> <p>5.4 Information from discussions fed into strategy</p>	<p>5.1 Willingness to attend meetings</p> <p>5.3 Public interest and marketability</p> <p>5.4 Appropriate social mechanisms for inclusion</p>
<p>6.1 Develop a National Sustainable Use Strategy.</p> <p>6.2 Work with FWD on relating protected area & buffer zone management of key species.</p>	<p>6.1 20 days FFI; 30 days FWD; printing costs; travel and workshop costs; £8,745</p> <p>6.2 5 days FFI; 15 days FWD; workshop costs; £2,315</p>	<p>6.1 National Sustainable Use Strategy published</p> <p>6.2 Revised PA management plans</p>	<p>6.1 Political will</p> <p>6.2 Commitment and willingness for change</p>