

**Darwin Initiative for the
Survival of Species**

**Annual Report
(Project Report Number 3)**

**Project Number
162/12/009**



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Darwin Initiative for the Survival of Species

Annual Report

1. Darwin Project Information

Project Ref. Number	162/12/009
Project Title	Darwin Field Station for Biodiversity Research, Education and Training
Country	The Gambia, West Africa
UK Contractor	University of Warwick
Partner Organisation(s)	Makasutu Wildlife Trust (MWT)
Darwin Grant Value	£163,826
Start/End dates	October 1 st 2003 – September 2006
Reporting period	April 1 st 2004 – 31 st March 2005 Report number 3
Project website	www.darwingambia.gm
Author(s), date	Dr Linda Barnett, Dr Susan Barker and Craig Emms, April 2005

2. Project Background

This project is located in The Gambia, West Africa in the protected area of Abuko Nature Reserve. The project was specifically designed to start to address some of the priorities raised in The Gambia National Biodiversity Strategy and Action Plan (2001) which recognizes that much of the biodiversity loss in The Gambia is due to lack of awareness, lack of reliable data and the necessary human and economic resources to undertake effective resource planning and management. Research, training and institutional capacity building are highlighted as priority areas.

This project aims to raise the capacity among government, NGOs and civil society to manage, conserve and monitor biodiversity, through i) providing an established centre for training of trainers, ii) providing a focus for biodiversity research and iii) producing a variety of education material about The Gambia's biodiversity.

3. Project Purpose and Outputs

The logical framework for this project is included in appendix 1.

Purpose of Project

Building the capacity of relevant personnel in The Gambia to assess and monitor biodiversity, undertake research on species, habitats and ecosystems and disseminate information to a variety of audiences.

Outputs

1. Partner organisation able to run training courses and provide facility to undertake, stimulate and facilitate research.

The Darwin Field Station, which serves as a focus for biodiversity research, training and education in The Gambia was completed in July 2004 and began to provide *training of trainers* courses in September 2004. The Darwin Field Station was officially opened on 20th October by the Permanent Secretary of the Department of State for Fisheries, Natural Resources and the Environment, receiving substantial coverage from the TV, radio and newspaper media. The Deputy British High Commissioner for The Gambia was also present and represented the British Government. Basic self-catering accommodation for six researchers is also being built in a fenced compound located in the buffer zone of Abuko Nature Reserve (ANR) on land that has been donated by the Government of The Gambia to the project.

The partner organisation to the University of Warwick, MWT, a Gambian NGO is committed to running the field station (and training courses) and researchers accommodation during and after the end of the project. To this end, staff from MWT(3) and the government departments of Department of Parks and Wildlife Management (2), Forestry (3), Fisheries (1), and Community Development (3), National Environment Agency(2), a local environmental consultancy firm, NACO (1) and the National Agricultural Research Institute (NARI) (1) were trained as trainers in September 2004 and March 2005 by the project leader and Executive Director of MWT. This has enabled subsequent training courses to be effectively *Gambianised*. 15 staff from 8 partner organisations have been trained as trainers in ecology and biodiversity assessment techniques. Subsequent step down courses provided by the Gambian trainers have resulted in 70 individuals from ten government departments and eleven other organisations (including NGOs, ecotourism projects) attending courses at the Darwin Field Station. During training courses MWT staff provided both logistical support (audio visual aids, lecture note handouts) and some lectures on the training courses, whilst the other trainers now deliver relevant lectures. The Darwin Field Station has now run two types of course: a basic one to introduce the concept of biodiversity and a more technical course covering research techniques and recording. Future courses over the next five months will include biodiversity indicators, conservation management (including preparation of management plans) and writing proposals and monitoring and evaluating biodiversity projects. The content of the courses has been agreed at workshops attended by the projects partners (January 04 and Nov 04 (see minutes from Nov 04 workshop in appendix 2 for minutes of the workshop and course outlines of future courses)). In line with the collaborative nature of the project, course materials were also prepared with the full co-operation and input from all project partners. To date emphasis has been placed on delivering the

Biodiversity, National Environmental Policy and the Law course since there is such a great general lack of awareness about biodiversity in The Gambia.

In addition to proving to be committed to the training courses being run at the Darwin Field Station trainers have also incorporated their newly acquired knowledge and skills into their work programmes e.g. in house training schemes, community meetings and fieldwork. In addition, the Department of Forestry and Community Development have expressed an interest in incorporating Darwin project training course material into their own training courses (e.g. departmental training courses (Kafuta Forest College run by the Department of Forestry and the Rural Development Institute run by Department of Community Development)). We have of course agreed in principle to this with the proviso that the materials carry the Darwin logo and fully acknowledge the source of material.

Since the project started 14 Gambian and 2 European researchers have undertaken research in Abuko Nature Reserve on biodiversity (increase of 400% over the last three years). The investigations have varied from short one day projects as part of the research skills course (e.g. pilot projects on primate behaviour, insect and bird activity, economic evaluation of forest resources) through to longer term inventory and monitoring projects (e.g. vegetation inventory and monitoring, amphibian and reptile monitoring, butterfly transect, moth and beetle inventory).

The Darwin Field Station is now fully equipped to provide researchers with basic laboratory facilities and a resource centre with a developing herbarium, photographic database and biological records data base and library. The field station has mains power and a back-up generator and mains water. During the project we have produced and distributed promotional material to encourage researchers to work at the Darwin Field Station. This has been done in such a way that it can be regularly updated and sent via post or email. The website also serves as a way of international researchers contacting us for support and advice on the biodiversity of The Gambia.

In addition to the field work and research based in Abuko Nature Reserve, the project leader and Executive Director of MWT have been collecting and collating literature about the flora and fauna of The Gambia for the resource centre in the Darwin Field Station. This has enabled us to prepare the first comprehensive species list for the country (of only about 3,300 species). A specific outcome of the project is thus that we have now identified specific and large gaps in knowledge about The Gambia's biodiversity. The species list is available to view and download from the website.

2. Digital photographic database produced and information on the biodiversity of The Gambia disseminated.

150 faunal pictures and 100 floral images have been produced so far as part of the Darwin project. These have been used to produce the field guides, website (including a pictorial database) and promotional material. This includes an impressive display in the public area of the Darwin Field Station about the Darwin project promoting the centre and raising awareness about biodiversity and conservation in The Gambia. The target audience is visitors to Abuko Nature Reserve (which are mainly international tourists and local people).

Information on Gambian biodiversity is being disseminated locally to the general public via the website and regular national newspaper articles, radio

and TV programmes, whilst partners to the project receive information through training courses, reports and meetings. Six articles about the Darwin Field Station have been published: three in University of Warwick publications (University of Warwick newsletter *Communicate*, Warwick Graduate News and Gibbet (Department of Biological Sciences newsletter), DEFRA publication Landscape, the BES Teaching Ecology newsletter and the Conservation news section of the international journal of conservation *Oryx* (copies of these publications have been sent with the CD).

Information about Gambian biodiversity will also be disseminated via four scientific publications currently in preparation (see below) and the easy to use field guides, half of which are being distributed free to schools throughout the country.

3. Publication and Presentations

We have now produced two out of the four field guides, one on the common butterflies of The Gambia and the other on the common mammals of The Gambia. The third on the common reptiles of The Gambia is currently at the printers and the final proof for this publication is attached as appendix 3.

We are currently preparing two publications on the herpetofauna of The Gambia for publication, one on the diversity and abundance of butterflies at Abuko Nature Reserve and one on capacity building in biological conservation projects using The Gambia as a case-study.

4. TV and radio broadcasts

The official opening of the Darwin Field Station was covered by the TV and radio media, and serialised on the radio. As part of the ongoing radio broadcasts, the Darwin team and staff from the national radio channel Radio Gambia have written and produced a drama script on biodiversity (English script attached in appendix 4) which was broadcast on the radio in the three local languages. The dramas were repeated three times over a period of three weeks on the radio and followed by a national *phone in* to an expert panel which answered enquiries about biodiversity.

An ex-BBC film producer has volunteered two weeks of his time to film and produce a video/DVD on the activities of the Trust and the Darwin project. This film is now being edited and translated into local languages and Gambia Radio and Television Service (GRTS) has committed itself to broadcasting the film on national TV when it is completed.

4. Progress

Brief History of the Project to Beginning of Reporting Period

At the beginning of the project in October 2003, we experienced a three month delay in starting and a change of location of the project, due to increased interest of the Gambian government in the project. A large amount of the in-kind funding to be provided by a project partner was also lost to the project. The Government of The Gambia donated a building to the project that required substantial renovation and considerably more time and material to bring it up to standard to be a centre for biodiversity research than was foreseen in the original proposal. This was mainly due to the location and nature of the building, which was more like a large shed at the end of a 300m

pathway in Abuko Nature Reserve. All materials (including 15-20 tons of foundation material) for the building renovation had to be transported by wheelbarrow along a sand path.

Summary of Progress over the Year (see appendix 5)

Project Achievements

Most outputs have been achieved or are on target. The Darwin Field Station is now built, equipped and up and running. It has been officially opened and has hosted two 10 day training of trainers courses, one on *Biodiversity, National Environmental Policy and the Law* and one on *Research Skills*. Five step down courses have also been run where trainers from the original courses have trained other Gambians. This means 80 Gambians have completed training courses at the Darwin Field Station. The accommodation for researchers is almost complete, and the first long term researchers from Germany and Hungary will be arriving in April 2005. The start of work to build the researcher's accommodation was delayed due to waiting for approval from the National Environment Agency who had to undertake an Environmental Impact Assessment.

There has been an increase in the number of researchers working on biodiversity in The Gambia. This includes trainers attending the research skills course, two staff from the Department of Parks and Wildlife Management and MWT staff who are undertaking a butterfly transect, an amphibian and reptile monitoring project using drift fences, and an inventory on the birds using observations of visitors and local bird guides together with their own observations. They are also producing images of the flora in the reserve for the digital database. We have produced promotional material to encourage research on the biodiversity of The Gambia at Abuko Nature Reserve (hard copy enclosed). It has been sent out to many UK institutions, which offer ecology and wildlife conservation courses. Similar institutions in the USA have also been contacted.

We have now produced two field guides (butterflies and mammals) and a project website full of information about Gambian biodiversity which is regularly updated. An additional output of the project has been the regular publication of a column entitled "Focus on Wildlife" in the national paper the Daily Observer, where we are able to talk about various aspects of biodiversity.

Two outputs are behind schedule: the training manuals 3,4,5 and 6 and the annual symposium. This project has a large number of in-country partners. It is sometimes very difficult to get senior members of all partners to meet together for such events as evaluation workshops as they are very busy and committed people. Delays in getting these people together has resulted in the annual symposium being moved to the last six months of the project and the training manuals 3,4,5 and 6 still being in preparation. We do not anticipate any difficulties with completing these areas in time for the end of the project.

Major Difficulties

One major difficulty was encountered during the past year. This was the slowness of the Gambian bureaucracy especially concerning the Environmental Impact Assessment (EIA) for the researcher's accommodation. As is the case with bureaucracy, we diligently and constantly followed up on the people concerned and gently reminded them about the project. Having a number of staff from the organisation that deals with EIAs (the National

Environmental Agency, NEA) attending some of the project courses proved to be helpful to our cause as they understood the relevance of the development.

Workplan for the Next Reporting Period

Month	Key Milestone
April	Research accommodation completed.
May	Field guide 3 produced. TV broadcast. Training manuals 3,4,5,and 6 completed.
June	Training courses 3,4,5 and 6 hosted at Darwin Field Station. Scientific publications submitted.
July	Pictorial database of website completed.
August	Field guide 4 produced
September	Evaluation workshop.

5. Actions Taken in response to previous reviews

Responses to the last annual report review where given in report 2.

6. Partnerships

The collaboration between the University of Warwick and MWT has been excellant. One advantage the collaboration has provided is easier assess to items of equipment etc. that can only be purchased from the UK, and expertise for the production of the training courses and research undertaken by local researchers including MWT staff.

Over the last year, the Darwin team has been developing links with a number of research institutions (Kew Gardens and Wutzberg University, Germany), as well as funding (local and international) bodies to develop research projects that will provide continuing support for the running and maintenance of the field station. These organizations include the British High Commission to The Gambia, US Peace Corps, UNEP, FAO, the World Bank and UNICEF. Two of the government training colleges in The Gambia (Kafuta Forest College run by the Department of Forestry and the Rural Development Institute run by Department of Community Development) have also expressed an interest in having modules on their one and two year courses respectively on biodiversity. MWT has also secured funding from the regional office of WWF to enable them to start remedial management work on the freshwater ponds in the reserve.

7. Impact and Sustainability

The profile of the Darwin project within The Gambia is high and has included a visit by the Secretary of State for the Department of State for Fisheries, Natural Resources and the Environment and senior members of the British High Commission – the High Commissioner and Deputy High Commissioner. The Darwin team has made a great effort to promote and raise its profile through newspaper articles, radio and TV broadcasts. In addition the course participants and the trainers have been very impressed by the project and do a lot to promote the project themselves. We have seen an increase in the number and range of people asking about and visiting the project (e.g. from

lay people through to politicians) and a great following of the *Focus on Wildlife* articles in the Daily Observer.

Analysis of course participants achievements results - detailed in appendix 6 (28 have passed (45-59%), 18 have achieved a credit (60-69%) and 21 have achieved distinction (70+%)) indicates that they are highly motivated and benefiting tremendously from the training. Confidential and anonymous feedback on course evaluations provides evidence of high quality training provision. We have also experienced an increase in demand for attendance on the Darwin courses and for new ones to be run.

The Darwin Field Station is the only institution in The Gambia providing training courses about biodiversity, its assessment and management. It is an essential and critical institution as there is a great gap in public awareness about biodiversity and its value (including politicians). Furthermore in general, government and NGO staff have very little knowledge about biodiversity. In the same vein, the project has also highlighted a paucity of research skills, ranging from proposal writing through to specialised taxonomic and field skills. The Gambia needs the Darwin Field Station badly. However with the current economic status of the country it is unrealistic to think of government providing even part funding towards its running costs, and MWT continues to source funding opportunities through additional projects to enable it to run courses.

In order to provide revenue to support the running of the Field Station, volunteers and researchers who want to undertake research in Abuko Nature reserve will be asked to pay a small amount for their basic accommodation.

8. Post-Project Follow up Activities

The national species inventory collated during the project has allowed us to identify specific and large gaps in knowledge about The Gambia's biodiversity.

The dearth of baseline information in The Gambia is in part due to a lack of skills in taxonomy, species identification and species inventory (one exception being the birds). For effective management plans for the protected areas and appropriate planning for biodiversity and natural resource management it is imperative that this under-capacity is addressed. The current project has made a valuable start but has also highlighted a much more severe problem than anticipated. A natural extension to the current Darwin project would thus be for the University of Warwick to co-ordinate training and national capacity building at the Darwin Field Station in specific taxonomic fields (e.g. priorities would be bryophyta, mycology, entomology, and mammology) for a small number of government and NGO personnel. The taxonomic expertise would be sought from the UK to help build the local capacity and provide longer-term institutional collaborations between The Gambia and the UK. The Darwin Field Station and project team would facilitate what would be short taxonomic training courses in the field, to be run at the Field Station by invited UK expertise, increasing taxonomic capacity on the ground and adding to the knowledge about The Gambia's biodiversity.

In addition, it is very important for the Darwin Field Station to continue to update and run the courses it has already produced and will have produced by the end of the project. It is unrealistic to think that course participants will

be able to pay to come on such courses, and actually need to be paid an allowance to attend (travel expenses, per diems). Honorariums for the lecturers, food expenses and overheads also need to be costed in.

Funding is currently being sought to provide courses for local chiefs and other decision makers in the communities surrounding Abuko Nature Reserve.

9. Outputs, Outcomes and Dissemination

The differences in actual outputs against those agreed in the initial 'Project Implementation Timetable' and the 'Project Outputs Schedule' are explained in more detail in section 3. Generally, we experienced a 3 month delay to the start of the project which explains the delay of achieving many of our targets. During the last year Dr Susan Barker (original project director) has moved from her position at the University of Warwick to the University of Alberta, Canada. Upon discussion with the University of Warwick and the Darwin Secretariat, it was agreed that Dr Linda Barnett should become project leader with Dr Barker playing a supportive role on the project. Although this change has not held up the project unduly, certain activities have been delayed and we are not entirely back on track time wise with the project.

Our training courses have been targeted at government and NGO personnel throughout the year. MWT staff run the Darwin Field Station and are committed to providing courses and the logistical support for future training courses. In order for this aspect of the project to be implemented, MWT is endeavouring to secure additional project funds, and means to bring in revenue to cover the future overheads and maintenance of the field station and researchers accommodation.

Information about the project and the facilities that the Darwin Field Station provides outside The Gambia has been disseminated via mail and a promotional leaflet to UK and USA educational establishments. The popular articles produced in country and in the UK have disseminated the project website address and many contacts are made through this means. The project leader is currently training a MWT member of staff so that they can update the website. MWT is seeking funds to sponsor the hosting of the website beyond September.

Dissemination at the local and national level has also been through popular articles, which have been published in the national newspaper.

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

Code No.	Quantity	Description
5	3	Continuous training to MWT Gambian staff throughout the project by project leader.
6a	80	Training of trainers courses and step down courses
6b	2	Training of MWT staff in identification of marine turtles, flora, amphibians, reptiles, general research skills, presentation and report writing, butterfly identification and transects
7	2	Biodiversity, National environmental Policy and the Law, Research Skills

8	52	Project leader full time on project
10	1	National species checklist
15a	17	Covering the official opening of the Darwin Field Station and delivery of the Research Skills course. Focus on Wildlife articles in national paper Daily Observer.
15b	6	Press release picked up by Coventry Evening Telegraph. Articles published in 3 separate University of Warwick magazines, DEFRA's Landscape, the British Ecological Society teaching newsletter and Oryx.
16a	3	Makasutu Wildlife Trust newsletter is issued three times a year.
16b	300	
16c	50	
18a	1	Covering the official opening of the Darwin Field Station.
19a	14	Serialized coverage of the opening of the Darwin Field Station plus three repeats of a radio drama (each in 3 local languages), making 9 in total with a telephone panel discussion.
20		31,926
21	1	Darwin Field Station for research, education and training with researchers accommodation
22	6	
23	2,901	British High Commission for office furniture etc. for the Darwin Field Station and researcher's accommodation.

- In Table 2, provide full details of all publications and material produced over the last year that can be publicly accessed, e.g. title, name of publisher, contact details, cost. Details will be recorded on the Darwin Monitoring Website Publications Database. Mark (*) all publications and other material that you have included with this report.

Table 2: Publications

Type *	Detail	Publishers	Available from	Cost £
(e.g. journals, manual, CDs)	(title, author, year)	(name, city)	(e.g. contact address, website)	
Book*	Common Mammals of The Gambia C.Emms and L Barnett 2005	Darwin Field Station, The Gambia	P.O. Box 2164, Serrekunda, the Gambia	5.00 (free to Gambian schools)
Report	Species checklist for The Gambia	Makasutu Wildlife	www.darwingambia.gm	

	C.Emms and L Barnett 2005	Trust	
Training Manual	Biodiversity, National Environmental Policy and the Law Training of Trainers Manual 2004	Makasutu Wildlife Trust	P.O. Box 2164, Serrekunda, the Gambia
Training Manual	Biodiversity, National Environmental Policy and the Law Step down Training Manual 2004	Makasutu Wildlife Trust	P.O. Box 2164, Serrekunda, the Gambia
Training Manual	Research Skills 2005	Makasutu Wildlife Trust	P.O. Box 2164, Serrekunda, the Gambia
Oryx Vol 39 No. 1 Conservation News P15 -16	The Darwin Field Station, the Gambia L.K. Barnett	Fauna and Flora International	info@fauna-flora.org

10. Project Expenditure

Table 3: Project expenditure during the reporting period (Defra Financial Year 01 April to 31 March)

Item	Budget (please indicate which document you refer to if other than your project schedule)	Expenditure	Balance
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The budget figures refer to the project schedule but take into account monies c/f from 2003/4 budget and monies c/f from 2004/5 to 2005/6, as previously agreed by the Darwin Secretariat.

*Rent, rates overheads budget increased by £205 c/f from 2003/4 to 2004/5.

** Office costs budget for 2004/5 increased by moving £1500 from printing budget to office costs.

*** Travel and subsistence budget increased by £1385 c/f from 2003/4 to 2004/5.

****Printing budget decreased due to £1500 transferred to office costs and £1500 c/f to 2005/6.

***** Budget changed due to £124 c/f from 2003/4 and £2000 c/f to 2005/6 for annual symposium.

*****Capital budget increased due to £15,178 c/f from 2003/4 to 2004/5.

***** Salaries budget increased due to £2186 c/f from 2003/2004, of which £1500 has subsequently been c/f to 2005/6.

11. Monitoring, Evaluation and Lessons

The indicators of achievement we have used for this project include its outputs. We have also employed the following additional measures to analyse their contribution to the project.

We assess the knowledge of our course participants pre- and post training courses to determine the impact of the course on cognitive gain. Of the 80 course participants, 13 failed to achieve a pass mark but were given certificates of attendance and encouraged to re-attend, 28 have passed (45-59%), 18 have achieved a credit (60-69%) and 21 have achieved distinction (70+%). We also use a follow up questionnaire, 3 months after the course to see what impact the course has had on participants. These questionnaires have indicated that biodiversity knowledge and skills are being used by participants in their daily work schedules (e.g. community meetings, departmental capacity building).

The use of feedback in our training courses has been critical in ensuring the courses are participatory. This was in part reflected in the Research Skills course, and will be a major part of the future courses in biodiversity indicators, conservation management and research/grant proposal writing.

Appendix 1: Project Logical Framework

Project summary	Measurable Indicators	Means of Verification	Important Assumptions
<p>Goal: To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but poor in resources to achieve</p> <ul style="list-style-type: none"> • The conservation of biological diversity, • The sustainable use of its components, and • The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources 			
<p>Purpose</p> <p>To build the capacity of relevant personnel in The Gambia to assess and monitor its biodiversity, undertake research on species, habitats and ecosystems and disseminate information to a variety of audiences.</p>	<p>Increase in personnel capable of working effectively on biodiversity and biodiversity related issues.</p> <p>Increase in number of researchers working on biodiversity in The Gambia.</p> <p>Increase in baseline information on biodiversity in the Gambia</p> <p>Development of biodiversity indicators for the Gambia</p> <p>Media items e.g. television and radio programmes.</p>	<p>Field survey reports and publications by partner organisations.</p> <p>Records of workshop and seminars.</p> <p>Biodiversity related courses in place.</p> <p>Research studies and scientific papers on the biodiversity of The Gambia.</p> <p>Training manuals, filed guides and website with photographic database in use.</p>	<p>Trained personnel incorporate new knowledge into their future work programmes.</p> <p>Retention of trained personnel in The Gambia.</p> <p>Researchers willing to undertake research in the Gambia.</p>
<p>Outputs</p>			
<p>1. Partner organisation able to run training courses and provide facility to undertake, stimulate and facilitate research.</p> <p>2. Digital photographic database produced and information on the biodiversity of The Gambia</p>	<p>1. Minimum of 8 staff from 5 partner organisations trained in ecology and biodiversity assessment techniques.</p> <p>2. 200 fauna and 300 flora images produced and stored on CD. Active website with hit-rate score.</p>	<p>1. Training centre and monitoring plots. Training manuals. Participants attendance and assessment records. Correspondance.</p>	<p>1. Co-operation with MWT and partners maintained.</p> <p>2. Compatible information sharing technology.</p> <p>3. Publishers, producers and distribution</p>

<p>disseminated.</p> <p>3. Publication and presentations.</p> <p>4. TV and radio programmes</p>	<p>3. Regular meetings to disseminate information.</p> <p>4. 4 radio, 2 TV broadcasts, 4 easy to use field guides, 6 training manuals, annual symposium, two scientific papers.</p>	<p>2. Images used in production of filed guides, website and promotional material. Minutes from meetings with gov. agencies, NGOs and civil society groups.</p> <p>3. Copies of all publications sent to Darwin Initiative and Branded with Darwin logo.</p> <p>4.</p>	<p>methods identified.</p>
<p>Activities</p> <p>1. Workshops</p> <p>2. Training and research programme</p> <p>3. Publications</p> <p>4. Publicity</p>	<p>Activity Milestones (Summary of Project Implementation Timetable)</p> <p>1. Planning Workshop (Nov 03 2 wks); project assessment and development of advanced courses workshop (August 04 3 wks); evaluation workshop August 05 (1 week).</p> <p>2. Field Station built and equipped (March 04); training course for trainers (March 04 2 wks); long term monitoring plots established (march 04); promotional material produced (April 04); training and research commences (April 04); advanced course for trainers (Jan 05).</p> <p>3. Production of easy to use filed guides 1 & 2 (Aug 04), training manuals 1 & 2 produced (Jan 04); website on line with pictorial database (June 04); Filed guides 3 and 4 produced (April 05); Training manuals 3, 4, 5 & 6 produced (Feb 05). Scientific papers (September 05).</p> <p>4. National opening of Darwin Filed station (March 04); launch of website with photographic database (June 04); one day national symposium (Feb 05). 4 radio, 2 TV broadcast and 8 newspaper articles (Sept 05).</p>		

Appendix 2: Minutes from Advanced Training Courses Workshop

Report on the Advanced Planning Workshop for the Darwin Initiative project

Darwin Field Station, Abuko Nature Reserve

6th January 2005

Persons present:

Mr Craig Emms, Makasutu Wildlife Trust

Mr Malang Jambang, Makasutu Wildlife Trust,

Mr Scott Temple, Peace Corps Volunteer, Makasutu wildlife Trust

Ms Ajie Binta Kinteh, NEA,

Mr Mawdu Jallow, Department of Parks and Wildlife Management

Mr Kalimang Camara, NACO,

Mr Alhagie Cham, TANGO,

Mr Famara Darboe, Department of Fisheries,

Mr Omar Jallow, University of The Gambia

Mr Kebba Bajo, Gunjur Environmental Protection and Development Group

Dr Linda Barnett, Darwin project co-ordinator

Absentees: NARI, Department of Community Development, Department of Forestry

Background

This one day workshop was convened to discuss the activities and achievements in the project to date, especially the training courses. A further aim of the workshop was to discuss future activities in the Darwin project, including deciding the content of future training courses.

After welcoming everyone to the workshop, the following report was presented by Dr Linda Barnett. Comments were then received from those present.

Activities and Achievements in the Project to Date

Darwin Field Station

A major achievement of the project is the Darwin Field Station which is now fully equipped and up and running. It has electricity (mains and stand/by generator) and running water. There are staff offices, a training room, basic laboratory, lab

stores, resource centre and general stores. The official opening of the centre took place on 20th October 2004 by the PS Fisheries, Natural Resources and the Environment who was delegated by the SOS.

Training Courses

Biodiversity, National Environmental Policy and the Law

The first training of trainers course took place in July 2004. It was a 10 day course, training 12 personnel from the Department of Wildlife (DPWM), Forestry (DFor), Fisheries (DFish), Community Development (DCD), National Environment Agency (NEA), MWT and a local environmental consultancy firm, NACO as trainers. The training on the course was provided by University of Warwick staff Dr Linda Barnett and the Executive Director of MWT, Mr Craig Emms. External lectures were also provided by staff from NEA, DFor, DFish and DPWM on the national environmental policies and natural resource laws. The evaluation of the trainers consisted of written tests on their knowledge of the area prior and post course, and scoring and feedback on individual and team presentations. The trainers also carried out a self-audit on their skills and knowledge at the beginning, mid point and end of the courses and were encouraged to continue this exercise as they continued to train. Individual feedback and evaluation was also provided to trainers on a further three days spent practicing giving lectures, six weeks after the first course. These trainers have now trained colleagues from their own departments and organisations on three step down training courses (each course 3 days long) at the Darwin Field Station. This process has effectively Gambianised the courses, with the commitment of the trainers and their respective departments to future training courses run at the field station. Commitment by the trainers to subsequent training courses has been on the whole high, except where trainers have left The Gambia (one unexpectedly left to pursue further studies) or other duties have come up (one trainer). Since the original training course trained two staff from the departments of wildlife, forestry and community development and further staff from other departments and NACO we have a good selection of trainers to call on for future training courses. 48 staff from 7 organisations have now been trained in ecology and biodiversity, national environmental policies and the law.

An additional spin off of the training courses was the interest of both the Kafuta Forestry College and the Rural Development Institute to include modules about biodiversity in their courses.

Research Skills

The research skills course has been written and is due to take place in January/February 2005, targeting research personnel from DPWM, Forestry, Fisheries, National Agricultural Research Institute (NARI), Community Development and the University of The Gambia.

Research

Research in Abuko Nature Reserve has had an effective start during the first year of the project. As well as establishing permanent plots and transects, a herpetological survey and monitoring scheme has begun (since July 2004), using two drift fences set up in the gallery forest and guinea savanna habitats. This project builds on a previous survey carried out in ANR in 1999. Both MWT and DPWM staff have acquired good identification skills concerning the amphibian and reptilian fauna through running the survey, and MWT is currently actively seeking funding to continue and expand its herpetological research. Baseline data collection on the permanent plot vegetation is on-going (concentrating on herbs in the wet season). MWT and DPWM staff have also acquired good identification skills concerning the trees, shrubs and climbers. Dr Linda Barnett has aided MWT in forming a new link with Kew Royal Botanical Gardens, London to help build a plant species list for the reserve, with the long-term aim of establishing a herbarium at the Darwin Field Station. In addition individuals have undertaken small research projects including traditional uses of the plants in the reserve, primate and bird behaviour and beetle collection. A number of universities and research institutions from outside The Gambia have already expressed interest in utilising the Darwin Field Centre with a general interest in developing undergraduate, Master and PhD research projects. Such initial contacts will take time to develop but are promising.

Dissemination of information

Promotional information has been produced and circulated about the Darwin Field Station to Universities and Colleges in the UK and USA. The Darwin project website has been launched on a local server in The Gambia (Quantumnet) in mid September, address www.darwingambia.gm. Images will be added to the pictorial database throughout the project, as will updates to the website.

In order to raise awareness of the Darwin project and biodiversity nationally, we have secured a contract with the national newspaper the Daily Observer to write a weekly column.

Easy to Use Field Guides

Guide 1 on Gambian butterflies has been published (1000 copies) and Guide 2 on Gambian mammals is currently being produced (2000 copies).

Comments

Those present congratulated the Darwin project on achieving a lot over a relatively short time. As a trainer on the step down courses, Mr Kalimang Camara asked for some more detailed feedback from course participants. Dr Barnett informed those present that on the whole the courses had been very well received by the course participants (evaluated through tests on their knowledge before and after the course, and through anonymous course evaluation forms). The majority of people on the step down courses said that the course was very

relevant to their work and enjoyed its multi-disciplinary nature. Some also said that we tried to pack too much into 3 days, but still thought all material was relevant. Dr Barnett informed those present that by taking on board comments provided by the trainers on the training of trainers courses it seemed that we had avoided major pitfalls with the administration and practical modalities of the course (e.g. provision of a hot meal at lunch time instead of sandwiches, and explanation about logistics e.g. per diems at the beginning of the course etc.). Dr Barnett informed those present that she planned to visit and discuss with Directors about the performance of the participants on the course. In some cases, it seemed that appropriate people had not been sent on the course, and had not really got very much out of it. She also intended to follow up to see what activities the course participants had undertaken to disseminate the information they had learnt on the course.

The group were then taken on a tour of the Darwin field station facilities by Dr Barnett and to permanent plots and drift fences in the gallery forest and Guinea savannah habitats by Malang Jambang.

Future Activities of the Darwin project

Dr Barnett presented the proposed future activities of the Darwin project that will take place before September 30th 2005, as follows:

Training Courses

The research skills course is due to take place in January/February 2005, targeting research personnel from DPWM, Forestry, Fisheries, National Agricultural Research Institute (NARI), Community Development and the University of The Gambia.

The advanced training course and subsequent step down training Courses will also take place in 2005.

Researchers accommodation

Basic self-catering accommodation will be provided for 6 researchers in a fenced compound. The plans for the accommodation have been drawn up and the site selected in the buffer zone of Abuko Nature Reserve (ANR), with the approval of the ANR Conservation Management committee. This land has also been donated by the Government of the Gambia to the project. The plans have been submitted to the National Environmental Agency and the start of building work is awaiting the result of an environmental impact assessment.

Research Activities

There will be further promotion of the Darwin Field Station, especially to encourage local researchers to undertake biodiversity research at Abuko Nature Reserve.

Dissemination of Information

There will be TV and radio programmes as well as further development of the website. Two further easy to use field guides will be produced on the common amphibians and reptiles of The Gambia.

National Symposium on Biodiversity Research in the Gambia

Provisionally it is planned that this event takes place around the International day for Biodiversity, usually held in May. It may be a one or two day event when researchers will present papers on biodiversity research in The Gambia. The media will of course be invited to cover the event and thus further raise the profile of biodiversity in the Gambia.

Additional Future Activities

In addition, it was noted that certain activities had been high-lighted as being very important to biodiversity conservation and the ethos of the Darwin project by Darwin trainers and those present at this workshop.

These included:

1. An invitation to politicians and people of influence to come to the Darwin field station so that they can be informed about the importance of biodiversity in The Gambia and why we are losing it.
2. As part or in addition to the above, youth leaders, administrative chairmen and their assistants to be invited.
3. The Darwin field station should try to provide training to bird watchers in The Gambia. Mr Emms informed those present that Makasutu Wildlife Trust was already working on this with those guides associated with Abuko Nature Reserve, and had secured funding from UNDP to start this process.
4. The importance of teachers in disseminating information about biodiversity was stressed. Ms Kinteh informed the group that NEA was working with

the Department of Education on environmental issues in the school curriculum, and with the training material in the Darwin field station training manual would seek to extend this into biodiversity.

5. In order to disseminate information it was suggested that information leaflets etc. be produced in local languages.
6. Mr Omar Jallow representing the University of the Gambia expressed great interest in encouraging undergraduate students to undertake research projects at the reserve.

Content of Future Training Courses

It was agreed by everyone present that 3 day training courses were the most practical for course participants, as people would find it difficult to spend a longer time training. It was also agreed that the advanced trainers course should only be 5 days long as the trainers would also find it difficult to spend a further ten days on a training course.

It was decided that future courses would cover:

1. Biodiversity monitoring and biodiversity indicators, conservation and management
2. Management plans for protected areas
3. Design, monitoring and evaluation of biodiversity projects

The first course would be 2 or 3 days long, and be targeted at different government departments and NGOs.

The second training courses would be of the workshop variety (1-2 days long) and be targeted at the Department of Parks and Wildlife, Forestry and relevant NGOs.

The third course would be one or two days long and targeted at government, NGO and relevant local communities.

The advanced trainer's course would provide information and training on all new subjects of the advanced courses.

Course 3: Biodiversity Monitoring, Biodiversity Indicators, Conservation and Management

Course Description

Monitoring and assessment of biodiversity are essential activities if we are to define status and trends in Gambian flora and fauna. This course explains why it is important to monitor and assess our biodiversity and the more common and realistic ways in which we can do this, with practical examples from research and monitoring work that is already ongoing.

The course is comprised of lectures, with some discussion and participatory sessions.

Length of course: 2 or 3 days

Target Audience: Government departments and NGOs

Course Content

Why assess biodiversity?

Biodiversity Assessment Techniques

Total species lists, rarities, collecting and preserving, habitat mapping, remote sensing, and databases.

Working with experts (e.g. taxonomists)

Monitoring species

Monitoring habitats and ecosystems

Hot spots of global and African biodiversity

Case Studies

Fish stock estimates and catch levels

Birds

Biodiversity Indicators

Convention on Biological Diversity and obligations of signatories

What is a biodiversity indicator?

National indicators of biodiversity

Assessment of change in the environment

How healthy is an environment?

Conservation and Management

What is conservation?

How can we conserve biodiversity?
Species, habitats and ecosystems
Country, regional and global conservation

Setting conservation priorities
Prioritising species
Prioritising habitats
Integrating conservation and development

Course 4: Management Plans for Protected Areas

Course Description

The designation or gazetting of a site or area as a protected area is only the first step in safeguarding it for future generations. In order to conserve and preserve the flora and fauna in such sites effectively in the long term it is essential to devise management plans. This course will provide a practical experience in the exercise of compiling a management plan. We will look at the different type of information that needs to be collected, analysed and interpreted in order to devise relevant management and development programmes for protected areas, as well as the type of activities required to implement and monitor progress. The course will comprise of lectures and practical group work.

Length: 1-2 days

Target Audience: Department of Forestry, DPWM and relevant NGOs

Course Content

Background

What are management plans, and why do we need them?

Styles and formats used for management plans

Content of management plans

Forestry plans

Wildlife plans

Information required

National, local and regional background

Description and inventory of the area

Management Considerations

Management programmes

Development programmes

Conclusions

Use of appendices

Reference sources

Summarising and interpreting data

Implementing and evaluating the management plan.

Course 6: Designing, monitoring and evaluating biodiversity projects

Course description

This course provides a general introduction to planning, designing, monitoring and evaluation of a biodiversity project. We will also explore donor sources and how to write up a concept paper.

Length: 1-2 days

Target Audience: Government personnel from the natural resource sector, NGOs and relevant local communities.

Course Content

Project planning

- i) Project identification/ the research topic
- ii) The key questions
- iii) Unit of analysis
- iv) Source of data
- v) Methods and tools
- vi) Time factor
- vii) Stakeholders and collaborators
- viii) SWOT analysis
- ix) Log frames

Monitoring: qualitative and quantitative indicators

Evaluation

Sustainability of projects

Sourcing funds – relevant donors and their criteria

Concept papers

Appendix 3: Common Reptiles of The Gambia
Being sent on CD

Appendix 4: English Script of Radio Drama on Biodiversity
Being sent on CD

Appendix 5: Report of progress and achievements against Logical Framework for Financial Year: 2004/2005

Project summary	Measurable Indicators	Progress and Achievements April 2004 -Mar 2005	Actions required/planned for next period
<p>Goal: To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but poor in resources to achieve</p> <ul style="list-style-type: none"> • The conservation of biological diversity, • The sustainable use of its components, and • The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources 			
<p>Purpose</p> <p>To build the capacity of relevant personnel in The Gambia to assess and monitor its biodiversity, undertake research on species, habitats and ecosystems and disseminate information to a variety of audiences.</p>	<p>Increase in personnel capable of working effectively on biodiversity and biodiversity related issues.</p> <p>Increase in number of researchers working on biodiversity in The Gambia.</p> <p>Increase in baseline information on biodiversity in the Gambia</p> <p>Development of biodiversity indicators for the Gambia</p> <p>Media items e.g. television and radio programmes.</p>	<p>2 Training of trainer's courses and 5 subsequent step down courses.</p> <p>10 trainers trained and 70 people attended training courses.</p> <p>16 people undertaken biodiversity research in ANR.</p> <p>Partner organisation staff trained in biodiversity research techniques including vegetation inventory and mapping, amphibian and reptile survey techniques, butterfly and bird identification skills, butterfly transect and monkey census and observation of behaviour techniques.</p> <p>Research ongoing in Abuko Nature Reserve</p> <p>Website on line and regularly updated (x flora images, x faunal images).</p>	<p>Finalisation of outstanding training manuals.</p> <p>Delivery of advanced training of trainer's course.</p> <p>Finish building researchers accommodation</p> <p>Start active management and restoration of habitats in ANR.</p> <p>Production of one field guide, and 4 more training manuals</p> <p>2 TV broadcasts</p> <p>Produce and collate further flora and fauna images and add to website.</p>

		Two easy to use field guides produced. 11 radio broadcasts.	
Outputs			
Partner organisation able to run training courses and provide facility to undertake, stimulate and facilitate research	Minimum of 8 staff from 5 partner organisations trained in ecology and biodiversity assessment techniques.	Advanced planning workshop for training courses completed with participation of 8 other organisations. Darwin field station opened and delivering training courses.	Advanced training of trainers course to take place. Continue to promote the station to encourage researchers to undertake research there.
Digital photographic database produced and information on the biodiversity of The Gambia disseminated	200 fauna and 300 flora images produced and stored on CD. Active website with hit-rate score. Regular meetings to disseminate information.	150 fauna and 100 flora images produced. Website 3000 hits (September-March). Information disseminated on a regular basis.	Continue to collect and collate images, and create the digital database as part of the website.
Publication and presentations.	4 radio, 2 TV broadcasts, 4 easy to use field guides, 6 training manuals, annual symposium, two scientific papers.	11 radio and 1 TV broadcast. Two easy to use field guides on i) common butterflies, ii) common mammals produced. Third on common reptiles at the printers.	Third and fourth easy to use field guides completed. Annual symposium held. Four training manuals completed. Two scientific papers submitted for publication. 1 TV broadcast.

Appendix 6: Darwin Field Station Course Results
Being sent on CD.