

## ***Darwin Initiative Annual Report 15-011***

### **Darwin Project Information**

<b>Project Ref Number</b>	15-011
<b>Project Title</b>	Building Capacity for Forest Inventory in the Republic of Congo
<b>Country</b>	Republic of Congo (Brazzaville)
<b>UK Contract Holder Institution</b>	Royal Botanic Garden Edinburgh (RBGE)
<b>Host Country Partner Institutions</b>	Wildlife Conservation Society (WCS)-Congo; Insitut Développement Rural; Centre d'Etudes sur les Ressources Végétales (CERVE); Centre National d'Inventaire et d'Aménagements des Ressources Forestières et Fauniques (CNIAF).
<b>Darwin Grant Value</b>	£184,500
<b>Start/End Dates of Project</b>	1 June 2006/31 March 2009
<b>Reporting Period and Annual Report Number</b>	1 June 2006 – 31 March 2007; Annual Report 1
<b>Project Leader Name</b>	Dr. David Harris
<b>Authors, Date</b>	Alexandra H. Wortley and David J. Harris (RBGE), April 2007

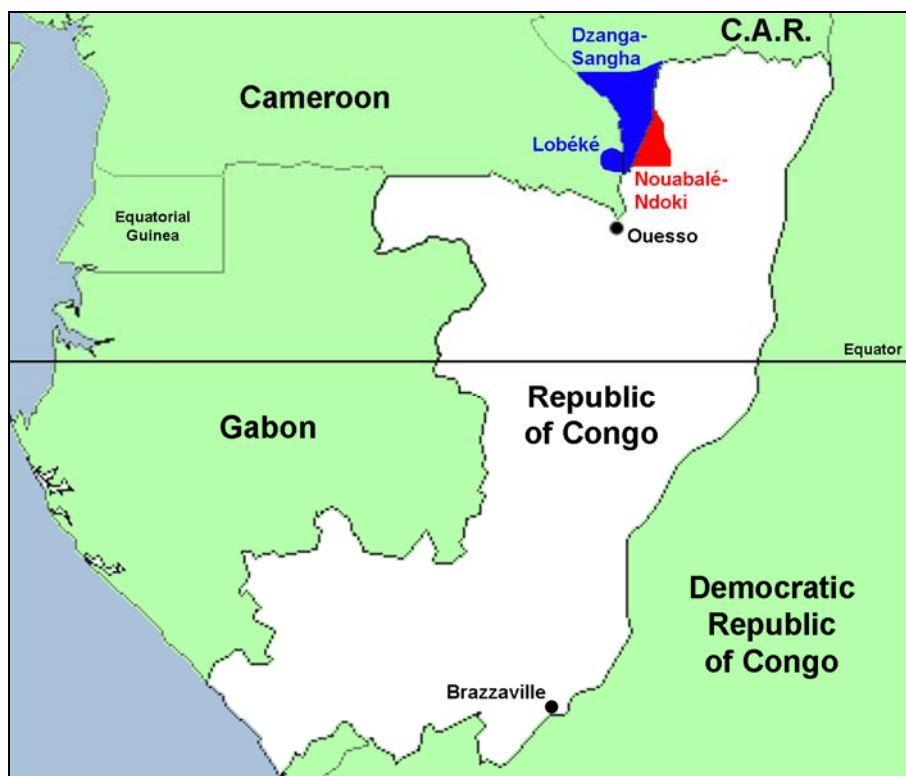
## List of Acronyms Used in this Report

<b>AETFAT</b>	Association for the Taxonomic Study of the Flora of Tropical Africa
<b>BRAHMS</b>	Botanical Research and Herbarium Management System
<b>CAR</b>	Central African Republic
<b>CBD</b>	Convention on Biological Diversity
<b>CERVE</b>	Centre d'Etudes sur les Ressources Végétales
<b>CIB</b>	Congolaise Industrielle des Bois
<b>CNIAF</b>	Centre National d'Inventaire et d'Aménagements des Ressources Forestières et Fauniques
<b>dbh</b>	Diameter at breast height (1.3 m)
<b>IELTS</b>	International English Language Testing System
<b>IUCN</b>	International Union for Conservation of Nature and Natural Resources (World Conservation Union)
<b>NGO</b>	Non-Governmental Organisation
<b>PROGEPP</b>	Project for the Management of Ecosystems Adjacent to the Nouabalé-Ndoki National Park
<b>RBGE</b>	Royal Botanic Garden Edinburgh
<b>WCS</b>	Wildlife Conservation Society

### 1. Project Background

This project focuses on the tropical forests of the Nouabalé-Ndoki National Park and surrounding Buffer Zone, in the northern Republic of Congo (see Map 1, below). In this area there is an immediate and growing threat to the long term future of biodiversity from timber extraction, habitat destruction and climate change. However, the Government of Congo, local researchers, foresters and conservationists are at present faced with inadequate botanical information upon which to base management plans for conservation and sustainable use. Prior to this project only a few people in the world were able to identify many tree species in northern Congo, and field guides or training manuals to the plants of the area did not exist.

The project was established, in recognition of this need, to support forest inventories through providing training, infrastructure development, taxonomic data and plant identification and training tools in formats suitable for local users. The foundation of these products is a comprehensive botanical dataset, accessible to all forest stakeholders, supported by a sustainable, tested infrastructure and trained personnel, and linked to global datasets for identification using modern techniques.



**Map 1. Location of study site, Nouabalé-Ndoki National Park, in the Republic of Congo**

## **2. Project Partnerships**

*Formal partnerships.* The relationships between all project partners have been strengthened considerably during the first year of the project, through the project leader's three trips to Congo and the reciprocal movement of one WCS staff member to Edinburgh in preparation for her future leadership role in the project. Collaboration between RBGE and WCS has been particularly strong and beneficial for the project, with WCS staff facilitating and supporting the training and research activities of the project in Nouabalé-Ndoki and surrounding buffer zone. In turn, WCS employees have benefited from the training and employment opportunities provided by the project. The ability to identify plant species on the ground in northern Congo has been the most immediate way in which WCS-Congo can help support the country in meeting its CBD (Convention on Biological Diversity) commitments. WCS-Congo is involved in writing management plans with the government and other interested parties. The project output of basic information on forest tree species' presence and abundance, some of which has already been generated, will support their ability to make evidence-based decisions on sustainable forestry and inform the creation of set-aside and protected areas.

Links with Université Marien Ngouabi have also been extended, and Botanique-Ecologie Maîtrise Assistant Dr. Moutsamboté has been a key player in the training element of the project. In return he has observed and tested new ideas for training by working closely with Dr. Harris. He has also received new textbooks and other teaching materials which will allow him to continue to develop his teaching programme. In addition, Dr. Moutsamboté has contributed to project research activities and continues to benefit from scientific exchange with colleagues on this project. This exchange of ideas and materials between the UK partners and the most important botanical trainer in Congo has strengthened the University's capacity to meet the country's CBD commitments.

The National Herbarium (CERVE) has already benefited by a contribution of specimens collected by the project; appropriate reference books have been supplied to the library and other equipment for the herbarium. Dr. Kami of CERVE has also been involved with the project in grant-writing activities. Two major grant applications to the French Government have been made, with support from Drs. Moutsamboté and Harris. One of these applications is to provide support for the herbarium; the other for a joint research project on a poorly-known protected area in northern Congo, Lac Télé, which would complement the existing Darwin Initiative project perfectly. The success of these two applications and further provision of accurately-identified herbarium specimens, including species not previously known in Congo, will strengthen the country's ability to meet its CBD commitments.

Our partnership with CNIAF is set to grow during Year 2, after a very positive meeting between its Director (Mr. François Ntsiba) and Dr. Harris in Brazzaville in January 2007.

The capacity of the RBGE to be an effective project partner has increased during the first year, as two members of staff have gained considerable experience in managing an international collaborative project. The images and specimens generated will also build the RBGE's capacity to deliver high quality biodiversity data to this and similar projects in the future.

In sum, the success of this project in meeting its first year targets has been due in no small part to the particularly strong partnerships developed, in particular those between RBGE and both WCS-Congo and Dr Moutsamboté. The contribution of WCS-Congo staff in terms of time and support has been absolutely essential. This has come from several parts of the organisation, including its director, accounts department, trainee participants and local project managers. The support provided by Connie Clark of the Project for the Management of Ecosystems Adjacent to the Nouabalé-Ndoki National Park (PROGEPP) has been particularly crucial for both the training and research aspects of the project. Dr Moutsamboté's field experience and expertise in teaching about the flora of Congo have also contributed significantly to the project during this year.

*Other Collaborations.* Contact has been made with the main forestry company working in the area, Congolaise Industrielle des Bois (CIB), and Dr. Harris made a site visit with researchers working on sustainability issues. Dr. Wortley visited Dr. William Hawthorne and Denis Filer at the Department of Plant Sciences, University of Oxford, to discuss direct collaborations and ideas for the development of innovative ways for delivering digital photographs of plants. Chris Wilks (WCS-Gabon) and Gretchen Walters (Missouri Botanical Garden) visited RBGE to discuss training techniques in equatorial Africa and detailed species-specific tree characters for the outputs from this project.

Visits to, and discussions with, other Darwin projects, including project 12-012 (Xate palms (*Chamaedorea* spp.) in Belize: conservation and sustainable management) by Dr. Harris contributed to the development of the ideas and protocols used in this project. At the Association for the Taxonomic Study of the Flora of Tropical Africa (AETFAT) Congress (Yaoundé, February 2007) Drs. Harris and Kami presented a poster which generated several contacts with potential partners from around the world. These included discussions on IUCN Red List assessments with Dr. Martin Cheek of the Royal Botanic Gardens, Kew (project 14-716, Red List Plants of Cameroon) and possible collaborations with the Center for Tropical Forest Science at the Smithsonian Tropical Research Institute.

The project link to the CBD focal point is Mr. Jean-Colin Namedoum, Directeur de la Conservation des Ecosystèmes Naturels at the Ministère de l'Economie Forestière et de l'Environnement. Contact is made through Dr. Mokoko (WCS).

### 3. Project Progress

#### 3.1 Progress in Carrying out Project Activities

Project progress during the first year is shown against the logical framework in Annex 1. The logical framework itself is shown in Annex 2.

*Activities towards training outputs.* Progress in determining and meeting the need for botanical training in Congo has been significant. The project initially envisaged training at all levels, from undergraduate to managerial; it has now become clear that the level of undergraduate training in the country is better than was previously thought, especially in terms of theoretical approaches. Thus our project has become more focused where needs are currently greatest, training graduate-level biologists in the practical skills of identification and inventory. However, by training potential trainers, such as herbarium staff, university staff and MSc students, this project's impact will filter down to all levels. By concentrating on training and supporting in-country trainers, the project will leave a lasting and sustainable legacy.

Since the project started in June 2006, three training trips to the Republic of Congo have taken place, during which seven para-taxonomists have been trained in botanical inventory, identification and collection techniques. In September, Mireille Ndoundou Hockemba travelled to Edinburgh to study General English and Academic English at Stevenson College, in order to enrol on the MSc in Biodiversity and Taxonomy of Plants at the University of Edinburgh in September 2007. This will equip her to continue to develop the project after its initial three years. In March 2007, Dr. Harris attended the XVIIIth AETFAT Congress in Yaoundé, Cameroon. A further conference is expected to be attended in Year 2, as detailed in the original Project Implementation Timetable.

*Activities towards permanent plot delimitation and specimen collection.* Project partners in Congo have contributed greatly to the primary outputs of the project during the first year, not least by setting-up, mapping and marking the trees contained within designated permanent plots, an activity which is now complete. In addition, Dr. Harris and two of the project trainees (para-taxonomists) are well advanced in the process of collecting botanical specimens from every tree within these plots having a diameter at breast height (dbh) of at least 10 cm. Collection of c. 10,000 specimens, each of three duplicates, is expected to be complete by May 2007.

*Activities towards production of checklist and training manual.* The success of our activities aimed at the primary outputs of permanent plots and collections is crucial to underpin the secondary activities of writing a checklist and training manual based upon the tree species found to be present in this area. To date, a *Draft Checklist to the Trees of the Northern Republic of Congo* has been already been produced and distributed, and the text and illustrations for a *Training Manual* based on the same species list are well underway.

The only differences between our actual outputs and those detailed in the initial Project Implementation Timetable and Project Outputs Schedule were that the initial trip by the UK project leader to Congo in August 2006 was shorter than anticipated (3 weeks); however, the required amount of training (2 weeks) was still completed during that time and the necessary collaborations with project partners established. Similarly, the second and third trips in October 2006 and February 2007 were slightly shorter than originally planned because we found we were able to complete the required level of training in a shorter time than anticipated. The December 2006 trip has been postponed to April 2007, as agreed by the Darwin Secretariat. BSc course development has been delayed to Year 2, due to an increased emphasis on training at higher levels and a strong existing undergraduate course (see discussion above).

### 3.2 Progress Towards Project Outputs

At the beginning of Year 1, we decided to concentrate our activities strongly towards primary outputs – training, the setting up of permanent plots and collecting of specimens – from which the secondary or derived outputs would naturally follow. These primary outputs are now well advanced. There has been one change in research design, namely the designation of 30 one-hectare permanent plots instead of 120 30 x 30 m plots. This change was made in order to better co-ordinate the research needs of all project partners; it represents more than doubling the sample size investigated by the project, and thus increases the number of botanical collections that can be made, and the likelihood of making collections of the rarer species. These plots have all been established one year ahead of schedule and over 5,000 specimens have already been collected (more than the total target for the three-year project). This means that the collections taken during Years 2-3 will increase the total number of collections to many more than originally expected – we now anticipate c. 10,000 specimens of tree species will be made available by the project. We have also adjusted the focus of the virtual herbarium to concentrate more closely on tree species, thus reducing the number of species covered by the collections and virtual herbarium.

Towards the end of the first year of the project, during a visit by Drs. Harris and Wortley (January-February 2007) significant progress was also made towards drafting the main secondary project output – a training manual and identification guide to the trees of the northern Congo. Due to the greater focus on plot-work during the earlier stages of the project and the increased number of tree species found, we have rescheduled production of the training manual slightly. The work on the text of the manual is now progressing well and is expected to be complete by December 2007, with the final manual to be published on schedule. The illustrations are also under production, with approximately half the species already illustrated by botanical artist Rosemary Wise. Based on the information and specimens collected by the two para-taxonomists and others, a *Draft Checklist to the Trees of the Northern Republic of Congo* has been produced and distributed.

One activity not envisaged for the first year was the attendance by Dr. Harris at the 2007 AETFAT congress. This enabled us to produce an additional output, a poster publicising the project and the Darwin Initiative, and to distribute copies of the *Draft Checklist*.

### 3.3 Standard Output Measures

**Table 1 Project Standard Output Measures**

Code No.	Description	Year 1 Total	TOTAL
4C	2-week training course – <i>Botanical Inventory and Identification</i> .	7	7
4D	Training course and subsequent follow-up training measured on pro rata basis.	4	4
6A	2 terms of tuition in General English as a foreign language and Academic English.	1	1
6B	2 terms of tuition in General English as a foreign language and Academic English.	24	24
7	Report: <i>Rapport de mission sur la formation botanique realisee dans le site du projet de gestion des ecosystemes peripheriques du parc (PROGEPP) a Kabo, Ouesso,</i>	1	1

	<i>Departement de la Sangha.</i>		
8	Time spent in Congo during one trip by two UK staff and two trips by one UK staff member.	15	15
12A	Botanical Research and Herbarium Management System (BRAHMS) database established and populated with collection data.	1	1
13B	Herbarium collections totalling 5,000 sheets to date contributed to herbaria of Brazzaville and Bomassa.	2	2
14B	Dr. Harris presented poster at XVIIIth AETFAT Congress.	1	1
15C	UK national press release.	1	1
20	Pole-pruners, blotters, corrugates, binoculars, hand-lenses, water-bottles, torches, specimen tags, software, books and information on CD.	£2,500	£2,500
22	One hectare permanent forest plots.	30	30
23	Contributions in-kind: rent, rates, heating and overheads £7,000; office costs £2,000; travel and subsistence £20,000; forestry supplies £2,000; field equipment £5,000; insurance £500; press releases £300; national park entry fees £3,000, salaries £38,000.	£77,800	£77,800

**Table 2 Publications**

Type	Detail	Publishers	Available from
Checklist*	<i>Draft checklist of the trees of the northern Republic of Congo</i> , David J. Harris & Alexandra H. Wortley, January 2007	Unpublished checklist	Dr. Harris, Royal Botanic Garden Edinburgh, 20A Inverleith Row, Edinburgh EH3 5LR, UK
Poster*	<i>Building Capacity for Forest Inventory in the Republic of Congo</i> , David J. Harris, Jean-Marie Moutsamboté, Emile Kami & Alexandra H. Wortley, January 2007	Unpublished poster	Dr. Harris, Royal Botanic Garden Edinburgh, 20A Inverleith Row, Edinburgh EH3 5LR, UK

\*included with this report

### 3.4 Progress Towards Project Purpose and Outcomes

*Purpose 1. To train staff for forest inventory and conservation.* Seven parataxonomists have so far been trained through a two week training course – *Botanical Inventory and Identification* – taught in French, in the field in northern Congo. This included training in botanical collecting, identification, specimen management, and data-entry. A report on the training, written by Dr. Moutsamboté, is included in Annex 3. Training has continued and the trainees' progress has been monitored during two subsequent visits by UK staff to Congo.

One of the trainees (Vincent Medjibe) has subsequently worked with the project on experimental design, establishing plots and supervising data collection. He will be taking his training forward through studying for a PhD on forest inventory and management in the region, from September 2007. Two of the other trainees (Gabriel Moukassa and Fabien Nzolani Silaho) are now employed as full-time para-taxonomists on the project, carrying out botanical collection and specimen identification in the permanent plots, using conventional collecting and drying techniques, measuring tree dbh and recording data on data-sheets. The four remaining trainees are also employed using their identification and inventory skills in the field, as research assistants with WCS. We plan to include them in further training courses during Year 2. Eight others have been trained in data entry, specimen collection and tree identification, and are employed on a part-time basis. One research assistant (Mireille Ndoundou Hockemba) has successfully completed two terms of study in General English as a Foreign Language and Academic English at Stevenson College Edinburgh. She has submitted her application to study for an MSc in Biodiversity and Taxonomy of Plants at the Royal Botanic Garden Edinburgh from September 2007.

The text of the *Training Manual* is well underway and c. 200 tree species have been illustrated by Rosemary Wise for inclusion in this publication. This manual will contribute to the sustainable legacy of the project by providing a lasting resource for further training.

*Purpose 2. To develop novel ways of organising and presenting botanical data.* A great deal of groundwork has been done in terms of gathering botanical data. Thirty one-hectare permanent plots have been established, in which all trees greater than 10 cm dbh have been mapped, measured and tagged with permanent numbered tags. In addition, c. 5,000 plant collections, most comprising three sheets, have been collected by the two para-taxonomists in twenty of the thirty plots. In terms of assessment, c. 3,000 of these have been checked and identified by Dr. Harris and Dr. Wortley, and specimens of dubious identity were recollected during return visits to the field plots, thus verifying the accuracy of the parataxonomists' collections and identification skills. The collections will shortly be made available at the herbaria of Edinburgh, Brazzaville and Bomassa. Over 1,000 digital images of tree species have also been taken to facilitate identification and to form the basis of the virtual herbarium. This output will be developed further and documented in the following years.

*Purpose 3. To provide crucial data and advice for management.* This outcome is likely to develop during the second and third years of the project, with the publication of indicators including papers and reports. Already, however, significant dissemination has taken place: we have generated a *Draft Checklist to the Trees of the Northern Republic of Congo* (Annex 4), which has been distributed to project partners and will be used in research, conservation and management activities in the area. Dr. Harris and Dr. Kami attended the AETFAT Congress in Yaoundé, Cameroon where they presented a poster of the project's findings and demonstrated the Checklist.

The project's main assumption – *continued support for conservation and sustainable use of forest resources by Congo government, NGOs and other stakeholders* – has held true and been demonstrated by the level of support and collaboration already received from project partners and others.



### **3.5 Progress Towards Impacts on Biodiversity, Sustainable Use or Equitable Sharing of Biodiversity Benefits**

So far, the project has provided seven individuals (para-taxonomists) with the skills to carry out botanical inventory and identify plants. This will in turn impact on their ability to research, conserve, manage and make decisions about sustainable forest use. All the trainees continue to work in the area covered by the project, for WCS-Congo, an NGO which is actively involved in producing such management plans. In addition, a significant body of high-quality, species-level data on forest composition is already available from this first year's activities, which will contribute to the scientific basis of management decisions.

## **4. Monitoring, Evaluation and Lessons**

The major output from the project in Year 1 has been training. The effectiveness and impact of the training in terms of achieving the project purpose has been monitored in a number of ways.

During the training course, Drs. Moutsamboté and Harris monitored and evaluated the trainee para-taxonomists' progress through a series of direct observations and interviews. Each day they reviewed the student's progress and modified their training accordingly. The data and specimens collected on the training course were also evaluated, and at the end of the course the trainers made an overall evaluation of each trainee's development. The trainees themselves took part in a training session on evaluation, run by PROGEPP Research Co-ordinator Connie Clark. She then carried out an independent evaluation based on interviews and feedback forms. The trainees were also asked to give feedback directly to their managers after the course, which was then passed to the project. The results of these evaluations have been used to direct slight modifications in the planned training courses for Year 2 of the project. The main outcome of all evaluation processes was that the trainees and their managers were very positive about the training course.

After the course, two para-taxonomists continued to work for the project. They have been monitored during two subsequent trips by the project leader and have also been continuously monitored by WCS staff in Congo. Dr. Harris has observed and assessed their activities in the field, and examined the specimens and data they have collected. In addition, the data entered into databases have been verified against the original datasheets and a subset of these checked against the trees themselves in the permanent plots. The main indicator of achievement for these two trainees has been the quantity and the quality of the specimens which they have collected. To date, the quality of both data collection and specimens has been far better than hoped – over 5,000 good quality specimens, each of three duplicates, backed up by verified data. These have proved invaluable in producing other project outputs including the *Training Manual* and *Draft Checklist*.

Of the other trainees from the course, one (Vincent Medjibe) has continued to work closely with the project. His progress has been monitored by his manager at WCS and his progress evaluated through their appraisal system. One of his successes during this period was to obtain a fellowship to study for a PhD at the University of Florida, USA. The four remaining trainees will be monitored and their progress measured against project purposes during Year 2.

The second strand of training in this project, for research assistant Mireille Ndoundou Hockemba, has so far consisted of tuition in English. Her progress has been monitored through weekly meetings with project staff in Edinburgh and discussions between Dr. Wortley and her tutors at Stevenson College. Formal evaluation of her progress will take place through the British Council International English Language Testing System (IELTS) examination.

During monitoring and evaluation of the first year of this project, we have learned that if training is given sufficient support and resources, the quality of outputs in terms of specimens and data collection can be very high. The inputs into training in this project which

might be considered higher than in comparable training courses include the seniority of the trainers and the ratio of trainers to trainees: our trainers were two experienced taxonomists, Drs. Moutsamboté and Harris, each with considerable training experience; our teaching ratio was two-to-seven. Given the quality and quantity of the specimens collected in the first year, we argue that this was a very worthwhile investment.

The other crucial aspect to monitoring and evaluation on this first year of the project was to implement changes as soon as evaluation showed that they were necessary. For example, the training course lesson plans were modified through daily evaluation. During the plot data collection, methodology was refined following evaluation of the para-taxonomists' activities during each training trip. Further adjustments, such as the introduction of datasheets to facilitate more accurate recording of data and the use of additional data-entry staff, enabled the para-taxonomists to make the most of their skills by spending the maximum amount of time in the field.

## **5. Actions Taken in Response to Previous Reviews**

Not applicable.

## **6. Other Comments on Progress not Covered Elsewhere**

None.

## **7. Sustainability**

We decided to concentrate on making concrete progress in project activities during the first year, before widely promoting its results. This is because, in our experience, many projects in this sub-region have failed as a result of unrealistic expectations. We hope this pragmatic approach will make the task of promoting the project during Years 2 and 3 much easier. In line with this, the first Congo local radio broadcast has been delayed to Year 2, at which time there will be more exciting project outputs and results to promote than there would have been in Year 1.

So far, promotion of the project has concentrated on meetings with potential partners and ministerial advisors in Brazzaville. The project is becoming more widely-known amongst the research, conservation and government communities both in Brazzaville and in northern Congo. The training course that took place in Year 1, and those that are planned for Years 2 and 3, have generated increased interest in botanical study and its role in biodiversity conservation among staff at all partner institutions. This has been evidenced by a growing demand for places on the next course.

Planning for an exit strategy has already started. Training one staff member to MSc level, to lead and continue the project after the initial three years, forms a crucial part of this strategy. This has already been initiated by Mireille Ndoundou Hockemba's transfer to Edinburgh to study. The project outputs, including the *Training Manual* and virtual herbarium, are designed to have a long-term impact and lifespan. The two grant proposals written and submitted with the National Herbarium (CERVE) to provide support for that institution are also part of the exit strategy. Although originally planned for Years 2 and 3, we decided in to take immediate advantage of a call for proposals Year 1, which could benefit the legacy of the project immensely.

## 8. Dissemination

Despite that we are only in the early stages of this project, a *Draft Checklist* of tree species has already been distributed amongst partner organisations and others, raising the profile of the project and providing a useful resource for biodiversity researchers. Further dissemination activities including reports to government, posters, and the *Training Manual* are expected during the following two years.

The project outputs have been designed so that dissemination can continue once the project itself has ended, by placing material on websites for downloading when required. The outputs will be available on the RBGE website for the long term. Funding for website maintenance will be provided by the RBGE and the user will provide the media for printing or storing the outputs.

## 9. Project Expenditure

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

Item	Budget	Expenditure	Balance	%
Rent, rates, heating, overheads etc.	-	-	-	
Office costs (e.g. postage, telephone, stationery)	-	-	-	
Travel and subsistence	£37,000 (transfer of £1,500 to Others: staff training agreed prior to Half Year report)	£37,157.88	-£157.88	-0.43
Printing	£0 (roll over of £4,000 to 2008-9 agreed with Secretariat 13 March 2007; see Annex 7)	-	-	
Conferences, seminars, etc.	-	-	-	
Capital items/equipment	£7,850 (vired £650 to Others; see Annex 8)	£7,228.42	£621.58	7.92
Others	£18,115 (transfer of £1,500 from Travel & subsistence agreed prior to Half Year report roll over of £4,610 from illustrations budget agreed with Secretariat 13 March 2007; see Annex 7; vired £650 from Capital items/equipment; see Annex 8)	£13,679.23	£4,435.77	24.49
Salary: Dr.	£19,962	£22,331.70	-£2,369.70	-11.9

Alexandra Wortley				
Salary: Field para-taxonomist 1	£2,278	£2,559.44	-£281.44	-12.35
Salary: Field para-taxonomist 2	£2,278	£2,559.44	-£281.44	-12.35
<b>TOTAL</b>	<b>£87,483</b> (total roll over of £8,610 to 2008-9 agreed with Secretariat 13 March 2007; see Annex 7)	<b>£85,516.11</b>	<b>£1,966.89</b>	<b>2.25</b>

The only large discrepancy in this budget is in "Others" which displays a 24.5% underspend during the first year. This is due to the slight delays in producing, and therefore paying for, illustrations and publications. Emails from the Darwin Secretariat agreeing the above changes in the budget are enclosed in Annexes 7 and 8.

## 10. Acknowledgements

The authors gratefully acknowledge the help and support received during this year from Jérôme Mokoko, Director of WCS-Congo, and Connie Clark at PROGEPP. Special thanks are also extended to Vincent Medjibe, Gabriel Moukassa, Fabien Nzolani Silaho and their field teams, for the hard work they have put into plot establishment and specimen collection, and to Dr. Jean-Marie Moutsamboté, Marien Ngouabi University, without whose dedication to training the next generation and enthusiasm for his profession the training course would not have been such a success.

## Annex 1 Report of Progress and Achievements Against Logical Framework for Financial Year: 2006/07

Project Summary	Measurable Indicators	Progress and Achievements April 2006 – March 2007	Actions Required/Planned for Next Period
<p><i>Goal: To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but constrained in resources to achieve</i></p> <p><i>The conservation of biological diversity,</i></p> <p><i>The sustainable use of its components, and</i></p> <p><i>The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources.</i></p>			
<p>Purpose. To train staff for forest inventory and conservation; to develop novel ways of organising and presenting botanical data; to provide crucial data &amp; advice for management.</p>	<p>One trained plant taxonomist (MSc), eight para-taxonomists &amp; c. 30 BSc students; virtual herbarium developed, distributed &amp; made available online, personnel trained to maintain it; papers, reports &amp; recommendations on sustainable forest management.</p>	<p>Seven para-taxonomists trained to date, in botanical collecting, identification and data entry; c. 1,000 digital images made; no reports planned for this reporting period.</p>	<p>Training of para-taxonomists will continue during trips to Congo in April, July and December 2007. Digital images continue to be collected during all trips. BSc course development is likely to be reduced since we have learned that there is a greater need for training at higher levels, but some contribution to undergraduate courses will be initiated in April 2007.</p>
<p>Output 1. Checklist of tree species with local names.</p>	<p>200 copies of checklist published by end Yr 2.</p>	<p>Checklist drafted and attached (Annex 4). Indicator appropriate.</p>	
<p>Activity 1.1 UK project leader visits to Congo (August 2007, October 2007, February 2008), including para-taxonomist training.</p>		<p>This activity laid the ground-work for Activity 1.2, carried out by the trained para-taxonomists. Training to continue during Year 2.</p>	
<p>Activity 1.2 Herbarium specimen collection.</p>		<p>Greater number of tree species found (c. 470) than expected. Collection to continue during Year 2.</p>	
<p>Activity 1.3 Checklist drafting.</p>		<p><i>Draft Checklist</i> written and distributed, to be finalised, published and distributed further during Year 2.</p>	

Output 2. Species checklists for 2 protected areas.	Two manuscripts drafted Yr 2; published in peer-reviewed journal Yr 3; two x 300 copies distributed.	Collections made towards a checklist of Nouabalé-Ndoki National Park (Activity 1.2) and buffer zone. Collections are also to be made in protected areas in Year 2. Indicator appropriate.
Output 3. 30 x 30 m permanent plots.	120 plots established by end Yr 2.	Thirty, one-hectare plots established instead. Indicator modified.
Activity 3.1 Permanent plot delimitation.		Plots to be maintained and collection of specimens within them completed by July 2007.
Output 4. Herbarium collections.	4,000 specimens representing 1,500 species by end Yr 3.	5,000 specimens representing c. 300 tree species collected (Activity 1.2). Project objectives altered to focus on tree species, alongside continuing collection of specimens of all 1,500 plant species estimated to occur in the region. Collecting to continue during Year 2, and specimens to be made available in herbaria at Edinburgh, Brazzaville and Bomassa. Indicator modified and already exceeded.
Output 5. Virtual herbarium.	5,000 images of 1,500 species by end Yr 3.	This part of the project and indicator modified to focus on tree species.
Activity 5.1 Image collection.		1,000 images generated. Further images to be acquired during Year 2.
Output 6. Tree identification training manual.	Drafted Yr 1; reviewed Yr 2; published Yr 3; 300 copies distributed.	Manual drafting, specimen selection and illustration slightly delayed due to increased focus on plot-work and specimen collection; nonetheless, full text and illustrations expected to be prepared by December 2007, and manual reviewed and published on schedule. Indicator appropriate.
Activity 6.1 Drafting training manual.		Draft nearing completion. Text to be completed during Year 2.
Activity 6.2 Specimen selection and illustration for training manual.		c. 200 specimens illustrated. Illustration to be completed during Year 2.

Output 7. Papers & reports on forest management & conservation.	At least two peer-reviewed papers & four reports published, sent to managers & policy-makers by end Yr 3.	Not planned for Year 1. Indicator appropriate. Papers and reports to be written during second year.
Output 8. Publicity material.	200 copies of two posters, three press articles, two radio/TV broadcasts.	Interest in the project has been high. Further publicity including radio broadcasts to follow in subsequent years. Indicators appropriate.
Activity 8.1 Press release.		First project press release taken up by Edinburgh Evening News, Cuttings and Bush Telegraph (Annex 5).
Activity 8.2 Poster presentation at XVIIIth AETFAT congress.		Interest in poster at conference (Annex 6) high. Further, output-related posters to be generated and distributed in Year 2.

## Annex 2 Project's Full Current Logical Framework

Project Summary	Measurable Indicators	Means of Verification	Important Assumptions
<p><b>Goal</b></p> <p><i>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</i></p> <p><i>the conservation of biological diversity,</i></p> <p><i>the sustainable use of its components, and</i></p> <p><i>the fair and equitable sharing of benefits arising out of the utilisation of genetic resources.</i></p>			
<p><b>Purpose</b></p> <p>1. To train staff for forest inventory and conservation.</p> <p>2. To develop novel ways of organising and presenting botanical data.</p> <p>3. To provide crucial data &amp; advice for management.</p>	<p>One trained plant taxonomist (MSc), eight para-taxonomists &amp; c.30 BSc students.</p> <p>Virtual herbarium developed, distributed &amp; made available online, personnel trained to maintain it.</p> <p>Papers, reports &amp; recommendations on sustainable forest management.</p>	<p>Training reports; payroll records; university exam records; reports.</p> <p>Distribution list and website.</p> <p>Copies of papers, reports &amp; recommendations, with distribution lists.</p>	<p>Continued support for conservation &amp; sustainable use of forest resources by Congo government, NGOs and other stakeholders.</p>



<b>Outputs</b>			
Checklist of tree species with local names.	200 copies of checklist published by end Yr 2.	Copy submitted with annual report.	Partners continue to have access to electronic media.
Species checklists for two protected areas.	Two manuscripts drafted Yr 2; published in peer-reviewed journal Yr 3; two x 300 copies distributed.	Drafts & copies of papers sent with annual reports.	Recommendations incorporated into management.
30 x 30 m permanent plots.	120 plots established by end Yr 2.	Plot data sent with annual reports.	Management plans continue to be prepared.
Herbarium collections.	4,000 specimens representing 1,500 species by end Yr 3.	Specimen lists sent with annual reports.	Conservation messages understood and acted upon.
Virtual herbarium.	5,000 images of 1,500 species by end Yr 3.	Image lists & CD sent with annual reports.	
Tree identification training manual.	Drafted Yr 1; reviewed Yr 2; published Yr 3; 300 copies distributed.	Draft, reviews, copy of manual & distribution list sent with reports.	
Papers & reports on forest management & conservation.	At least two peer-reviewed papers & four reports published, sent to managers & policy-makers by end Yr 3.	Copies of manuscripts, reviewers' comments and reports sent with final report.	
Publicity material.	200 copies of two posters, three press articles, two radio/TV broadcasts.	Copies of all outputs sent with annual reports.	

<b>Activities</b>	<b>Activity milestones</b>	<b>Assumptions</b>
1. Training	Yr 1: six wks para-taxonomy training; BSc course developed. Yr 2: MSc student enrolled; five wks para-taxonomy training; two wks undergraduate training. Yr 3: MSc completed; four wks para-taxonomy training; two wks undergraduate training.	MSc candidate & para-taxonomists of suitable calibre are selected, complete training & remain employed.
2. Documenting	Yr 1: Tree checklist written; manual drafted. Yr 2: Virtual herbarium & protected area checklists started; manual tested. Yr 3: Herbarium & checklists completed; manual published & distributed.	Papers accepted for publication.
3. Advising on forest management	Yr 1: Plots selected; herbarium specimens collected. Yr 2: Data analysis; reports & papers submitted. Yr 3: Papers reviewed & published; management recommendations disseminated.	Press take up stories.
4. Publicising and disseminating	Yr 1: Project initiation workshop; UK press release; Congo radio/TV broadcasts. Yr 2: Congo radio/TV broadcasts; posters. Yr 3: UK press release; results & outputs workshops.	

**Annex 3 Report: *Rapport de Mission sur la Formation Botanique Réalisée Dans le Site du Projet de Gestion des Ecosystemes Peripheriques du Parc (PROGEPP) a Kabo, Ouesso Departement de la Sangha***

See attached file (15-011\_Annex 3.pdf)

**Annex 4 *Draft Checklist to the Trees of the Northern Republic of Congo***

See attached file (15-011\_Annex 4.pdf)

**Annex 5 Press Coverage of Project 15-011**

See attached files (15-011\_Annex 5a.pdf; 15-011\_Annex 5b.pdf, page 5)

**Annex 6 Poster Presented at XVIIIth AETFAT Congress, 2007**

See attached file (15-011\_Annex 6.pdf)

**Annex 7 Email from Darwin Secretariat Agreeing to Transfer of Funds, 13 March 2007**

See attached file (15-011\_Annex 7.htm)

**Annex 8 Email from Darwin Secretariat Agreeing to Transfer of Funds, 16 March 2007**

See attached file (15-011\_Annex 8.htm)

### ***Checklist for submission***

	Check
Is the report less than 5MB? If so, please email to <a href="mailto:Darwin-Projects@ectf-ed.org.uk">Darwin-Projects@ectf-ed.org.uk</a> putting the project number in the Subject line.	Y
Is your report more than 5MB? If so, please advise <a href="mailto:Darwin-Projects@ectf-ed.org.uk">Darwin-Projects@ectf-ed.org.uk</a> that the report will be send by post on CD, putting the project number in the Subject line.	N
Do you have hard copies of material you want to submit with the report? If so, please make this clear in the covering email and ensure all material is marked with the project number.	N
Have you completed the Project Expenditure table?	Y
Do not include claim forms or communications for Defra with this report.	Y