

# Darwin Initiative – Final Report

(To be completed with reference to the Reporting Guidance Notes for Project Leaders  
[\(http://darwin.defra.gov.uk/resources/reporting/\)](http://darwin.defra.gov.uk/resources/reporting/) -  
 it is expected that this report will be a **maximum** of 20 pages in length, excluding annexes)

## Darwin project information

Project Reference	15-021
Project Title	Strengthening the National Biodiversity Strategy in Congo Brazzaville
Host country(ies)	Democratic Republic of Congo and Congo (Brazzaville)
UK Contract Holder Institution	University of Reading, CAER
UK Partner Institution(s)	Royal Botanical Gardens, Kew Natural History Museum, London Oxford University Museum of Natural History
Host Country Partner Institution(s)	Botanical Garden of Kisantu, DRC University of Kinshasa, DRC Ministère de l'Economie Forestière et de l'Environnement (MEFE), Congo Groupe d'Etude et de Recherche sur la Diversité Biologique (GERDIB), Congo Centre d'études sur les Ressources Végétales (CERVE), Congo
Darwin Grant Value	£ 189,330
Start/End dates of Project	1 September 2006 – 31 August 2009
Project Leader Name	Dr Simon G. Potts
Project Website	<a href="http://www.rdg.ac.uk/caer/project_congo.html">http://www.rdg.ac.uk/caer/project_congo.html</a>
Report Author(s) and date	Simon G. Potts, Nicolas Vereecken, Ioannis Vogiatzakis and Alain Pauly, 28 April 2010

## 1 Project Background

The project sought to provide an evidence-base to help support development of the National Biodiversity Strategy of Congo (Brazzaville) and Democratic republic of Congo (DRC). Little information was available to inform decision making for biodiversity conservation, reflecting a lack of national capacity and expertise. Following the conflict in the 90's, herbaria were severely degraded and no entomological facilities existed. Large areas of both countries were poorly studied and very under-represented in museum and herbarium collections. This presented an opportunity to build local capacity, implement training, and apply rigorous scientific methodologies to generate useful datasets for CBD applications.



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

To answer this, and other subsequent sections, it is useful to set the project in the context of two operational phase: **Phase 1** (Sept 2006 – June 2009) where Mr Ralf Becker was subcontracted to the University of Reading as the project manager based in Congo and was responsible for the implementation of the botanical and entomological research, capacity and training activities. The project primarily focussed on botanical and entomological biodiversity assessments with approximate relative contributions to the overall project of 90% and 10% respectively. **Phase 2** (July – December 2009) after Ralf Becker's contract was terminated due to recurrent failure to provide project deliverables and failure to meet contractual agreements with Reading University and the Darwin Initiative. All botanical (and most entomological) data, including backups, were retained by Mr Becker, who refused to release it to either the University or the Darwin Initiative. For this phase, entomological work was coordinated and undertaken by Dr Nicolas Vereecken (Free University of Brussels, Belgium).

**Phase 1:** During early stages of the project links were built with the CBD focal point, Mr Jean Colin Namedoum, and later with his replacement Mr Augustin Ngoliele. It was agreed that project outputs should be channelled to the CBD focal point via our local partner GERDIB, and the focal point would evaluate the data for integration it into the NBSAP. Agreements were made that the project would deliver its botanical data to the CDB focal point, however, Mr Becker's refusal to release data means that this agreement was not met by the project. Further relations between the project and GERDIB collapsed after unresolved disputes between GERDIB and Mr Becker. Finally a planned workshop to train local partners in CBD articles and protocols was not delivered by Mr Becker.

**Phase 2:** Entomological work during this phase (6 months) was assessed as not substantial enough on its own (i.e. without the phase 1 data) to be useful for CBD purposes. Though the project formally finished in Dec 2009, ongoing pollinator monitoring activities are expected to be compiled and made available to the CBD focal point. This data is likely to contribute to Congo and DRC's ability to support the **CBD International Initiative for the Conservation and Sustainable Use of Pollinators** (IICSUP, <http://www.cbd.int/agro/pollinator.shtml>) in the 'In-depth review of the programme of work on Agricultural Biodiversity' at the 9th Conference of Parties (COP 9 Decision IX/1, 2008, <http://www.cbd.int/decision/cop/?id=7147>). Specifically the CBD calls for parties to implement the IICSUP, and in particular to:

1. "Complete information on pollinator species, populations and their taxonomy, ecology and interactions". This project will have established the first pollinator databases in the region and improved understanding of pollinator ecology and their interactions and improve taxonomy by supporting traditional methods and developing bee bar-coding for the region.
2. "Establish the framework for monitoring declines and identifying their causes". The project has set up a pollinator monitoring scheme in DRC, the first of its kind in the region.
3. "Disseminate openly the results through the clearing-house mechanism and other relevant means". The project will lodge its species data with the CBD focal point and with GBIF.

## 3 Project Partnerships

**Phase 1:** Initial relations between the project and a number of Congolese partners were good. Memoranda of understanding (MoU: outlining project aims, scientific and financial frameworks and expected outputs) were signed by several host country partners during a scoping visit to Congo in 2005. Original partners included: Mr Anatole Nagaye (Councillor to the Minister), Ministry of Economy, Forestry and Environment (MEFE); the University of Marien Ngouabi, Brazzaville (UMN) and the National Herbarium, Brazzaville (NHB). Following the project start-

up seminar in February 2007, two additional partners were included: Dr Serge Valentin Pangou, Groupe d'Etude et de Recherche sur la Diversité Biologique (GERDIB) and Dr Antoine Ouabonzi, Centre d'études sur les Ressources Végétales (CERVE). These partners generally participated, supported and facilitated project activities.

Relations remained good with MEFE and Mr Becker made a joint presentation (with GERDIB) to the new Minister of Research (Matson Mampouja). Though a MoU was signed stating that no direct financial payments would be made to UMN, staff and students made unrealistic demands for substantial *per diem* payments without demonstrating any contribution to the project goals. This partner was dropped in 2008, as recommended by our reviewer, and responsibilities moved to GERDIB. The project also strengthened its partnerships in Pointe Noire where the herbarium began operating as an effective unit following capacity building and training by the project, after many years of neglect. Links with Forest Rangers department in Pointe Noire were also developed with several rangers working directly on the project.

There was, however, a collapse in relations with all local partners in Congo Brazzaville following the expulsion of Mr Becker from the country in March 2008. Communication between the UK project team and Brazzaville partners were all channelled through Mr Becker, however, local partners were unwilling to work with and communicate with him and with wider project after his expulsion. No further contributions from MEFE, GERDIB or CERVE were realised for the remainder of the project.

**Phase 2:** Following discussions with Darwin and the project evaluator, the project extended its work to western parts of Democratic Republic of Congo (DRC) near the Brazzaville border. New collaborating organisations were identified and partnerships built. Dr Vereecken took over management of the entomology aspects of the project and oversaw all research, training and capacity building related to pollinator biodiversity. He brought additional specialist expertise, strong working links to DRC organisations and additional scientific rigour to the survey work. He established successful working partnerships with a number of local organisations including the Botanical Garden of Kisantu (BGK), the University of Kinshasa (UoK). The partnership with the BGK and UoK were initiated in October 2008 with regular visits and meetings with several scientists working with these institutions. At the UoK, a team consisting of the Rector of the Faculty of Sciences (Dr Julien Punga), along with two research assistants (Dr Justin Mbimbi and Dr Anthony Kikofi), was formed to co-supervise undergraduate students to join the project in the framework of their Master's thesis. Productive scientific cooperation continued for the remainder of the project and these partnerships continue beyond the formal end date.

**UK and regional partnerships:** Partnerships with other institutions working with pollinators (especially bees) continue to thrive in the UK: Natural History Museum, London; Oxford University Museum of Natural History; and worldwide: Royal Belgium Institute of Natural Sciences, Belgium; African Pollinator Initiative; US Department of Agriculture, USA; University of York, Canada. The University of York agreed to prioritise our Congo bees for DNA bar-coding as part of the Bee Barcode of Life initiative ([www.bee-bol.org](http://www.bee-bol.org)) which aims to obtain DNA barcodes for the bees of the world.

The project leader has no evidence from Mr Becker to comment on the state of partnerships with botanical experts in UK and Europe.

## 4 Project Achievements

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

Without availability of the project's botanical data the project's contribution to the final goal has been severely constrained. Therefore measurable impacts on biodiversity, sustainable use and equitable sharing are unknown and unlikely to be significant. However, in Congo Brazzaville and DRC, institutional capacity to undertake high quality biodiversity research has been

strengthened through refurbishment of herbarium and entomology collections and training of local researchers (detailed under section 4.6).

Delivery of pollinator biodiversity monitoring and inventory datasets to the CBD focal point in DRC will help support their contribution to the CBD International Initiative for the Conservation and Sustainable Use of Pollinators.

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

The main purpose of working with Congolese nationals to strengthen the National Biodiversity Strategy has been achieved to some extent. The National Herbarium in Pointe Noire (NHB) was established as a biodiversity resource and entomological collections set up in Botanical Garden of Kisantu (BGK) and the University of Kinshasa (UoK). In both Congo Brazzaville and DRC the project has developed basic research and training facilities to provide longer-term in country expertise.

The project has failed to provide an integrated biodiversity assessment of Mayombe Mountains region and a generic framework of activities needed to assess and monitor biodiversity; this is entirely due to the absence of botanical data (withheld from the project by Mr Becker).

## 4.3 Outputs (and activities)

### **Output 1: Well maintained and data-based plant and insect collections.**

Activity 1.1. Provision of capacity building materials for herbarium and national entomology collection. The herbarium building in Pointe Noire was refurbished and extensive equipment installed including all the materials necessary for processing and storing plant samples and databasing specimens. Insect collections and facilities have been established in Pointe Noire and Brazzaville (GERDIB) with dedicated storage cabinets and all the necessary equipment for preparing and curating insect material. IT equipment and databases have been provided for the herbariums and entomology collections. A partial botanical collection generated by the project may be present in NHB and a database was established but the latter has been withheld by Mr Becker. However, an additional entomology reference collection and database for pollinating bees has been established by Dr Vereecken and has been made available to all project partners in DRC.

### **Output 2: Partners able to collect and curate plant and insect material.**

Activity 2.1. Training workshops. Some hands-on training was provided by Mr Becker in Congo; he provided training for students from the Forestry College and herbarium in Pointe Noire, including two long-term assistants receiving almost a year's training, and also for eight short-term assistants receiving more than a week of training. However, Mr Becker failed to deliver any of the formally agreed workshops for training. Dr Potts and Dr Pauly ran a 3 day workshop (Appendix 8a) for 7 researchers on bee survey methods, identification, databasing and material curation at GERDIB. Dr Vereecken conducted a similar workshop in Botanical Garden of Kisantu (Appendix 8b)

### **Output 3: Inventory and biodiversity assessment for Mayombe Mountains (MM) complete.**

Activity 3.1. Environmental stratification of MM identifying survey sites. The GIS team at Reading University undertook a stratification of the MM region and provided this to Mr Becker as a basis for developing a sampling programme. It is unclear whether Mr Becker adopted this framework or not.

Activity 3.2. Field surveys. Mr Becker undertook ~12 months of field surveys in MM but details of sites, methods and quality of data are unknown. A claimed total of 1,800 plant collections

were made which included  $\pm 6,000$  specimens, but no evidence of this is available to the project. Some bee material was provided by Mr Becker, but standardized methods were not employed (despite specific field protocols being provided to him) and site information (including GPS coordinates) were generally lacking, making these specimens of little research value. Dr Vereecken established and managed a standardized sampling programme in the Bas-Congo province of DRC. This has formed the basis of a monitoring programme which is ongoing.

Activity 3.3. Identification of material initially in Congo then by ex-Congo experts (after field surveys). The degree of Congolese participation in identification of botanical material is unclear and was not documented by Mr Becker. Bee material collected in DRC was prepared with local partners and identified by Dr Pauly (Royal Belgium Institute of Natural Sciences).

#### **Output 4: Monitoring framework for MM established.**

Activity 4.1 Assessment and monitoring manual. This output relied entirely on the availability of high quality botanical data and so has not been realised (data withheld by Mr Becker). However, a manual of pollinator monitoring methods has been written (in French and English) and circulated by Drs Potts, Pauly and Vereecken (Appendix 10).

#### **Output 5. Dissemination of project outputs.**

Activity 5.1. Workshop reports. The entomology training workshop in Congo Brazzaville was delivered as planned and reported (see appendix 8a); a further entomology workshop in DRC was also delivered (see appendix 8b). Mr Becker did not deliver the botanical-related workshops, but substituted some on-the-job training though this was not clearly documented.

Activity 5.2. Public seminar, press release, popular article and paper. The start-up seminar (Feb 2007) was attended by 19 representatives of MEFE, GERDIB, CEVRE and covered all key aspects of the project (Appendix 9). A dedicated project website has been online since September 2006: [http://www.rdg.ac.uk/caer/project\\_congo.html](http://www.rdg.ac.uk/caer/project_congo.html). Two presentations were made to the Congolese Minister of Research by Mr Becker: one in Brazzaville and one in Pointe Noire. Each presentation was also accompanied by posters. A talk was also given by Mr Becker to the French Ambassador and a diverse audience of researchers, diplomatic staff, local government officials and business persons. During the visit of the Minister of Research to Pointe Noire, the project was included in two national TV news programmes, featuring the herbarium and entomology collections. A press release in the UK resulted in two newspaper articles, two popular press articles and a page on the BBC News online website. A popular science talk was given at Café Scientifique, Reading.

Activity 5.3. TV broadcast. Mr Becker was unable to secure access to local TV stations but did promote the project during a radio interview on 'Radio Nari'.

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

The figures entered in Annex 4 are based on those which are known for all the entomological activities of the project, and the botanical activities in phase 1 of the project are based on Mr Becker's reports. Further, botanical outputs may have been achieved in phase 2 but Mr Becker has not made these available to the project.

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

The project has introduced standardised methods and field designs for the surveying and monitoring pollinators. This involved the provision of equipment, training and field manuals for researchers in both Congo Brazzaville and DRC. These core methodologies have been developed in Europe (Westphal et al. 2008 Measuring bee biodiversity in different habitats and

biogeographic regions. *Ecological Monographs* 78: 653-671) and adopted in several developing countries, including Congo, DRC, India and Uganda, through other Darwin projects.

The contribution of botanical aspects of the project to technical and scientific cooperation is hard to judge in the absence of direct evidence.

#### 4.6 Capacity building

**Phase 1:** The herbarium building in Pointe Noire, Congo has been refurbished (doors, windows and roof and electrical supply) and extensive equipment installed including all the materials necessary for processing and storing plant samples and databasing specimens. Insect collections and facilities have been established in Pointe Noire and Brazzaville (GERDIB) with dedicated storage cabinets and all the necessary equipment for preparing and curating insect material. IT equipment and databases have been provided for the herbariums and entomology collections.

**Phase 2:** A bee reference collection >400 reference specimens along with photos of wild bees has been established in Botanical Garden of Kisantu and at the University of Kinshasa; in addition collecting and storage equipment has been provided with relevant field guides and supported by training workshops. The project has ensured that these institutions now have the independent capacity to conduct pollinator surveys and monitoring and to store and database specimens for long-term usage.

#### 4.7 Sustainability and Legacy

It is unclear at this time how well any of the Phase 1 achievements will endure. It is expected that the refurbished herbarium in Pointe Noire will continue to operate as a regional centre, and at the time several national and international operations were interested in using and supporting the facility. To prevent the facility degrading to its former state a continuous, but modest, level of investment will be needed.

Phase 2: The establishment of the bee collection at Botanical Garden of Kisantu and at the University of Kinshasa will be maintained as functional facility as new projects have been developed based on this resource thereby ensuring its upkeep. Bee biodiversity surveys, supported by Reading University, Free University of Brussels and Royal Belgium Institute of Natural Sciences, are ongoing and expected to continue at least until 2011. This facility will also be included in an ESPA (Ecosystems Services for Poverty Alleviation) project proposal "Sustainable delivery of pollination services to strengthen rural livelihoods in Sub-Saharan Africa".

### 5 Lessons learned, dissemination and communication

The key lesson learnt is not to rely on a single individual (here, Mr Becker) to manage a project and build and maintain partnerships with locals. Despite credible and elaborate verbal reports of achievements, and reasons for delayed delivery of project outputs, the need for independent assessments and/or photographic or written evidence is important to corroborate these verbal reports.

**Phase 1:** Further dissemination activities based on this phase are impossible without release of data by Mr Becker.

**Phase 2:** This phase has been scientifically productive and dissemination activities are expected to continue as research provides further material. The project is working with Paul

Latham, who has worked in the Bas-Congo province for more than 20 years, and published a 350pp. volume on the "Plantes utiles du Bas-Congo" and a fully illustrated book "Honeybee Plants of the Bas-Congo Province, DRC" (150pp). We plan to co-author a French edition of this book with the possibility to update it with more plants observed during the present project, data on wild bees, and considerations on the impact of habitat loss, particularly the forest, on the decline of the local bee fauna.

## 5.1 Darwin identity

Clear acknowledgment of the Darwin Initiative was always included in any publicity material including press releases, field manuals, project equipment and vehicles. The logo was used extensively throughout. In phase 1, MEFE, GERDIB and other persons associated with the project were made fully aware of the sponsorship of the project by the Darwin Initiative. In phase 2, all joint activities were clearly highlighted as being a direct result of Darwin support and this is widely recognised by all those involved in the project in DRC.

## 6 Monitoring and evaluation

The logframe was used as the main tool for monitoring and evaluation in accordance with normal project management practices for Darwin, and other projects, at Reading University. During phase 1, regular updates with the project manager, Mr Becker, were undertaken and oral or email reports on progress obtained. Requests for copies of data were always circumvented with a wide range of (initially) plausible excuses, and while clear evidence of progress for some activities (e.g. refurbishment of the herbarium) were made available, refusal to provide evidence for other activities triggered an investigation into Mr Becker's ability to meet his contractual obligations to Reading University and the Darwin Initiative. There were three stages in this process: (i) a series of internal meetings between Mr Becker and the project leader where Mr Becker failed to produce overdue deliverables or give acceptable reasons for failure to do so; (ii) lengthy dialogue followed by a formal meeting arranged between Mr Becker and a senior member of staff at Reading University (Prof Ken Norris, Director of CAER), however Mr Becker failed to attend, and Prof Norris concluded that Mr Becker was "unmanageable"; (iii) a meeting between Mr Becker and the Darwin Secretariat where a plan of actions was agreed by all parties, but Mr Becker failed to undertake a single action.

All reasonable efforts were made to support and assist Mr Becker, but the University had no choice to terminate his contract in 2009. Without access to botanical data and other outputs it was therefore not possible to assess most of the outcome and impact indicators; but given Mr Becker's track record it is probable that most were not achieved by him.

Monitoring of phase 2 operated on the same principal, using the logframe with regular contact with the project staff, and proved to be an efficient method.

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

All suggestions and recommendations by the reviewer of the annual reports were implemented; these were discussed with the partners.

## 7 Finance and administration

### 7.1 Project expenditure

Original Budget Headings	TOTALS		Variance
	Budget	Expenditure	
Staff Costs			993
Rent, rates, heating, lighting, cleaning			0
Office costs e.g. postage, telephone, stationary			-589
Travel and Subsistence			-3,197
Printing			-500
Conference, Seminars etc.			-620
Capital items / equipment			2,388
Other costs (Audit, fieldwork costs)			2,560
<b>Total</b>			<b>1,035</b>

#### Breakdown of Project Participants Salary Expenditure:

Dr Simon G. Potts  
Dr Ioannis Vogiatzakis  
Dr Geoff Griffiths  
Field assistants  
Ralph Becker

#### Breakdown of Major Capital Expenditure:

DUMELOW INTERNATIONAL LTD  
GPS Equipment  
Planitroi  
Computing

#### Breakdown and Summary Description of "Other" Expenditure:

Audit  
Field work

The global expenditure was 1% more than budget. Expenditure for budget lines for Staff, Rent etc., Travel and Subsistence, were all within  $\pm 10\%$  of the approved budget. Office costs were 59% less than budgeted as most samples from Congo were brought back as hold luggage rather than posted, so postage costs were reduced accordingly. No printing costs were incurred (100% less than budgeted) as the biodiversity assessment manual to be provided by Mr Becker was never delivered and therefore not printed. Conference costs were 69% less than budgeted as the lack of botanical outputs from Mr Becker did not warrant dissemination activities. Capital items were 36% higher than originally budgeted as refurbishment costs for the herbarium was greater than anticipated and more equipment needed to be installed in order to bring the facility up to a functioning level. 'Other' was an approved budget line in the proposal and expenditure was 29% greater than planned. The category 'Other' included a wide range of refurbishment materials and field work equipment needed for capacity building and research. This included entomology equipment for collecting and storing insects, botanical equipment for collecting, storing and preserving specimens, books, field guides and so forth.

Staff costs for Dr Geoffrey Griffiths were shifted to Dr Ioannis Vogiatzakis as his expertise, which was best matched to the project, only became available after the proposal submission. Field assistant costs were less than anticipated and may also reflect the early resignation of several individuals supervised by Mr Becker.



Capital items included:

- Spare parts for the Unimog 4WD field vehicle (£1,655) and shipping costs to send the vehicle from UK to Congo (£2,540);
- GPS equipment: this included 2 specialist high quality GPS units and antennae for navigational and site mapping in the rainforest plus several entry level units used for training purposes and donated to the herbarium.
- Two refurbished Toughbook field computers for use in the rainforest.
- Computing: 10 refurbished desktop PC's plus software, monitors, keyboards etc. (from Computer Aid); 3 laser printers and 3 CD burners. All for capacity building in the herbarium and GERDIB.

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

Dr Nicolas Vereecken spent several months working on the project and all his time was contributed in kind. In addition new partners in DRC also contributed staff time and access to facilities without cost to the project.

## **7.3 Value of DI funding**

The project would have been impossible without DI support and the refurbishment of the herbaria and other facilities could not have been achieved otherwise. The fieldwork and botanical research also depended entirely on DI funding, and in the absence of Mr Becker's misconduct, the project would have been expected to deliver high quality data and new scientific findings.

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

Project summary	Measurable Indicators	Progress and Achievements	Actions required/planned for next period
<p><b>Goal:</b> To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but constrained in resources to achieve</p> <ul style="list-style-type: none"> <li>The conservation of biological diversity,</li> <li>The sustainable use of its components, and</li> <li>The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources</li> </ul>	<p>biodiversity from within the United Kingdom but</p> <ul style="list-style-type: none"> <li>The conservation of biological diversity,</li> <li>The sustainable use of its components, and</li> <li>The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources</li> </ul>	<p>(report on any contribution towards positive impact on biodiversity or positive changes in the conditions of human communities associated with biodiversity eg steps towards sustainable use or equitable sharing of costs or benefits)</p>	<p>(do not fill not applicable)</p>
<p><b>Purpose</b> To work with Congolese nationals to strengthen the National Biodiversity Strategy.</p>	<ol style="list-style-type: none"> <li>National Herbarium in Pointe Noire (NHB) established as a biodiversity resource; entomological collection set up at GERDIB.</li> <li>Developing basic research and training facilities for long-term in country expertise.</li> <li>Integrated biodiversity assessment of Mayombe Mountains region (MM).</li> <li>Generic framework of activities needed to assess and monitor biodiversity.</li> </ol>	<ol style="list-style-type: none"> <li>NHB in Pointe Noire refurbished and staff trained; entomological collections set up at GERDIB, Botanical Garden of Kisantu (BGK) and at the University of Kinshasa (UoK).</li> <li>Facilities set up both research and training at NHB, GERDIB, BGK and UoK.</li> <li>Not completed (data withheld by Mr Becker)</li> <li>Not completed for botanical work (data withheld by Mr Becker); completed for entomological work.</li> </ol>	
<p><b>Output 1.</b> Well maintained and data-based plant and insect collections.</p>	<p>Existing NHB material curated; entomological collection housed at GERDIB. Material data-based.</p>	<p>Existing plant material curated and databased at NHB – indicator appropriate. New entomology collection established at GERDIB and BGK. GERDIB database incomplete (data withheld by Mr Becker) – indicator appropriate.</p>	
<p>Activity 1.1 Provision of capacity building materials for herbarium and national entomology collection.</p>	<p>45 NHB, UMN and GERDIB staff trained variously in survey,</p>	<p>Completed</p>	
<p><b>Output 2.</b> Partners able to collect and curate plant and insect</p>	<p>43 staff trained in various methods for collecting and curating material – indicator appropriate.</p>		

material.	database, GIS and identification methods.	
Activity 2.1. Training workshops:	Collection management, introduction to Brahm's database, basic GIS, and sampling protocols Advanced collection management and databasing, CITES protocols, overview of key CBD articles Species assessment (IUCN protocols), rapid biodiversity assessment methods, teaching methods Advanced GIS and basic data interpretation using field material	Workshop for botanical aspects delivered by Mr Becker; workshops for entomological aspects delivered by Drs Potts, Pauly and Vereecken Workshop not delivered by Mr Becker. Workshop not delivered by Mr Becker. Workshop not delivered by Mr Becker.
<b>Output 3.</b> Inventory and biodiversity assessment for MM complete.	Vegetation mapping, analysis and monitoring report drafted. 9 months field work, identification and databasing.	Mapping, analysis and reporting impossible due Mr Becker withholding data – indicator appropriate. Fieldwork conducted, status of identification and databasing work unknown due Mr Becker withholding data – indicator appropriate.
Activity 3.1. Environmental stratification of MM identifying survey sites.		Completed
Activity 3.2. Field surveys		Completed
Activity 3.3. Identification of material initially in Congo then by ex-Congo experts (after field surveys)		Status of identification and databasing work unknown due Mr Becker withholding data
<b>Output 4.</b> Monitoring framework for MM established.	Biodiversity monitoring plan drafted. Manual drafted, reviewed and publication date set.	Not completed (data withheld by Mr Becker) – indicator appropriate. Botanical manual not complete (Mr Becker failed to deliver); entomological manual written reviewed and distributed in French and English – indicator appropriate.
Activity 4.1 Assessment and monitoring manual published and circulated.		Not completed (data withheld by Mr Becker)
<b>Output 5.</b> Dissemination of project outputs	NBS framework workshop planned and conducted. Three public seminars, press releases, popular articles and papers. Two TV broadcasts and an exhibition.	Workshop not delivered by Mr Becker – indicator appropriate. Project kick-off dissemination was successful with public seminar, press release, radio interview and TV coverage. Subsequent dissemination of project outputs impossible in absence of data (withheld by Mr Becker) – indicator appropriate.

Activity 5.1. Workshop reports (2 months post workshop)	Workshop held by Drs Potts, Pauly and Vereecken fully reported. Those where Mr Becker was responsible were not delivered and therefore not reported
Activity 5.2. Public seminar, press release, popular article and paper	1 public seminar, 1 press release completed. No data (withheld by Mr Becker) to support paper or popular article.
Activity 5.3. TV broadcast	The project was included in two national TV news programmes, featuring the herbarium and entomology collections.
Activity 5.4 NBS framework workshop.	Workshop not delivered by Mr Becker.

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

Outputs re-organised as advised by previous review.

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p>Goal:</p> <p>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 the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of benefits arising out of the utilisation of genetic resources</p>			
<p>Purpose</p> <p>To work with Congolese nationals to strengthen the National Biodiversity Strategy (NBS).</p>	<p>1) NHB established as a biodiversity resource; <del>UMN</del> GERDIB entomological collection set up.</p> <p>2) Developing basic research and training facilities for long-term in country expertise.</p> <p>3) Integrated biodiversity assessment of Mayombe Mountains region (MM).</p> <p>4) Generic framework of activities needed to assess and monitor biodiversity.</p>	<p>1) Reports on the research facilities and working database.</p> <p>2) Participation of Congolese in training programme.</p> <p>3) Reports and publications on plant and pollinator biodiversity of MM, and monitoring plan.</p> <p>4) Report and workshop for CBD focal point and government ministries.</p>	<p>Effective collaboration between GERDIB, NHB, <del>UMN</del>, MEFE and ex-Congo experts.</p> <p>Continued political stability in Congo Brazzaville.</p> <p>Incorporation of new knowledge into MEFE activities.</p>
<p>Outputs</p> <p>1) Well maintained and data-based plant and insect collections.</p> <p>2) Partners able to collect and curate plant and insect material.</p> <p>3) <del>Environmental stratification of MM completed</del> identifying survey</p>	<p>1) Existing NHB material curated; <del>UMN</del> GERDIB entomological collection housed. Material data-based.</p> <p>2) 45 NHB, <del>UMN</del> and GERDIB staff trained variously in survey, database, GIS and identification methods.</p> <p>3) Vegetation mapping, analysis and monitoring</p>	<p>1) Receipts for equipment donated. Report on facilities.</p> <p>2) Reports on training; workshop attendance records and skill assessment by experts.</p> <p>3) Report peer-reviewed.</p> <p>4) Report on vegetation maps, checklists and databases of plants and pollinators.</p>	<p>1) Commitment from NHB and <del>UMN</del> GERDIB staff.</p> <p>2) Local support for workshops available.</p> <p>3) None. Technique used by UoR.</p> <p>4) Extreme weather and health issues.</p> <p>5) Expert input available.</p> <p>6) None.</p> <p>7) Continued cooperation with MEFE maintained.</p>

<p><del>sites.</del></p> <p>3) 4) Inventory and biodiversity assessment for MM complete.</p> <p>4) 5) Monitoring framework for MM established.</p> <p>6) <del>Assessment and monitoring manual published and circulated.</del></p> <p>5) Dissemination of project outputs</p> <p>7) <del>NBS framework workshop.</del></p> <p>8) <del>Publications and presentations.</del></p>	<p>report drafted.</p> <p>4) 9 months field work, identification and databasing.</p> <p>5) Biodiversity monitoring plan drafted.</p> <p>6) Manual drafted, reviewed and publication date set.</p> <p>7) NBS framework workshop planned and conducted.</p> <p>8) Three public seminars, press releases, popular articles and papers. Two TV broadcasts and an exhibition.</p>	<p>5) Report and monitoring timetable.</p> <p>6) Manual assessment by expert panel. 50 copies circulated; two copies sent to Darwin Initiative.</p> <p>7) Direct involvement of Ministries and CBD focal point.</p> <p>8) Copies of publications sent to Darwin Initiative.</p>	
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## Annex 3 Project contribution to Articles under the CBD

### Project Contribution to Articles under the Convention on Biological Diversity

Article No./Title	Project %	Article Description
6. General Measures for Conservation & Sustainable Use		Develop national strategies that integrate conservation and sustainable use.
7. Identification and Monitoring	40	Identify and monitor components of biological diversity, particularly those requiring urgent conservation; identify processes and activities that have adverse effects; maintain and organise relevant data.
8. In-situ Conservation		Establish systems of protected areas with guidelines for selection and management; regulate biological resources, promote protection of habitats; manage areas adjacent to protected areas; restore degraded ecosystems and recovery of threatened species; control risks associated with organisms modified by biotechnology; control spread of alien species; ensure compatibility between sustainable use of resources and their conservation; protect traditional lifestyles and knowledge on biological resources.
9. Ex-situ Conservation		Adopt ex-situ measures to conserve and research components of biological diversity, preferably in country of origin; facilitate recovery of threatened species; regulate and manage collection of biological resources.
10. Sustainable Use of Components of Biological Diversity		Integrate conservation and sustainable use in national decisions; protect sustainable customary uses; support local populations to implement remedial actions; encourage co-operation between governments and the private sector.
11. Incentive Measures		Establish economically and socially sound incentives to conserve and promote sustainable use of biological diversity.
12. Research and Training	60	Establish programmes for scientific and technical education in identification, conservation and sustainable use of biodiversity components; promote research contributing to the conservation and sustainable use of biological diversity, particularly in developing countries (in accordance with SBSTTA recommendations).
13. Public Education and Awareness		Promote understanding of the importance of measures to conserve biological diversity and propagate these measures through the media; cooperate with other states and organisations in developing awareness programmes.
14. Impact Assessment and Minimizing Adverse Impacts		Introduce EIAs of appropriate projects and allow public participation; take into account environmental consequences of policies; exchange information on impacts beyond State boundaries and work to reduce hazards; promote emergency responses to hazards; examine mechanisms for re-dress of international damage.
15. Access to Genetic Resources		Whilst governments control access to their genetic resources they should also facilitate access of environmentally sound uses on mutually agreed terms; scientific research based on a country's genetic resources should ensure sharing in a fair

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



## Annex 4 Standard Measures

Code	Description	Totals (plus additional detail as required)
<b>Training Measures</b>		
1a	Number of people to submit PhD thesis	0
1b	Number of PhD qualifications obtained	0
2	Number of Masters qualifications obtained	0
3	Number of other qualifications obtained	0
4a	Number of undergraduate students receiving training	7
4b	Number of training weeks provided to undergraduate students	6
4c	Number of postgraduate students receiving training (not 1-3 above)	1
4d	Number of training weeks for postgraduate students	3
5	Number of people receiving other forms of long-term (>1yr) training not leading to formal qualification( ie not categories 1-4 above)	2
6a	Number of people receiving other forms of short-term education/training (ie not categories 1-5 above)	17
6b	Number of training weeks not leading to formal qualification	4
7	Number of types of training materials produced for use by host country(s)	3
<b>Research Measures</b>		
8	Number of weeks spent by UK project staff on project work in host country(s)	59
9	Number of species/habitat management plans (or action plans) produced for Governments, public authorities or other implementing agencies in the host country (s)	0
10	Number of formal documents produced to assist work related to species identification, classification and recording.	2
11a	Number of papers published or accepted for publication in peer reviewed journals	0
11b	Number of papers published or accepted for publication elsewhere	0
12a	Number of computer-based databases established (containing species/generic information) and handed over to host country	4
12b	Number of computer-based databases enhanced (containing species/genetic	0

Code	Description	Totals (plus additional detail as required)
	information) and handed over to host country	
13a	Number of species reference collections established and handed over to host country(s)	4
13b	Number of species reference collections enhanced and handed over to host country(s)	2
<b>Dissemination Measures</b>		
14a	Number of conferences/seminars/workshops organised to present/disseminate findings from Darwin project work	1
14b	Number of conferences/seminars/ workshops attended at which findings from Darwin project work will be presented/ disseminated.	0
15a	Number of national press releases or publicity articles in host country(s)	0
15b	Number of local press releases or publicity articles in host country(s)	0
15c	Number of national press releases or publicity articles in UK	1
15d	Number of local press releases or publicity articles in UK	0
16a	Number of issues of newsletters produced in the host country(s)	0
16b	Estimated circulation of each newsletter in the host country(s)	0
16c	Estimated circulation of each newsletter in the UK	0
17a	Number of dissemination networks established	0
17b	Number of dissemination networks enhanced or extended	0
18a	Number of national TV programmes/features in host country(s)	2
18b	Number of national TV programme/features in the UK	0
18c	Number of local TV programme/features in host country	0
18d	Number of local TV programme features in the UK	0
19a	Number of national radio interviews/features in host country(s)	1
19b	Number of national radio interviews/features in the UK	0
19c	Number of local radio interviews/features in host country (s)	0
19d	Number of local radio interviews/features in the	0

Code	Description	Totals (plus additional detail as required)
	UK	
<b>Physical Measures</b>		
20	Estimated value (£s) of physical assets handed over to host country(s)	£17,750
21	Number of permanent educational/training/research facilities or organisation established	0
22	Number of permanent field plots established	0
23	Value of additional resources raised for project	£102,403
<b>Other Measures used by the project and not currently including in DI standard measures</b>		
	Staff trained and receiving extensive (>1 month) hands-on training in the field	14

## Annex 5 Publications

Type *	Detail (title, author, year)	Publishers (name, city)	Available from (eg contact address, website)	Cost £
*BBC News online	Experts hope to save rare plants. 2007	BBC	<a href="http://news.bbc.co.uk/1/hi/england/berkshire/6988915.stm">http://news.bbc.co.uk/1/hi/england/berkshire/6988915.stm</a>	0
*Popular press	Scientists explore uncharted Congo. 2007. University of Reading Magazine for Alumni and Friends, Issue 5.	Belmont Press, Northampton	<a href="http://www.fp.rdg.ac.uk/alumni/magazine.htm">http://www.fp.rdg.ac.uk/alumni/magazine.htm</a>	0
*Popular press	Exploring the Congo. 2007. University of Reading Bulletin, No 470	University of Reading	<a href="http://www.reading.ac.uk/bulletin">www.reading.ac.uk/bulletin</a>	0
Newspaper	Congo trip: Examining man's effects on rainforests. 20 September 2007. Reading Evening Post	Reading Evening Post	Reading Evening Post <a href="http://www.getreading.co.uk">www.getreading.co.uk</a>	0
Newspaper	New finds in Congo. 20 September 2007. Reading Chronicle	Reading Chronicle	Reading Chronicle <a href="http://www.readingchronicle.co.uk">www.readingchronicle.co.uk</a>	0
*Manual	Estimation de la biodiversite  En abeilles: Manuel de methodologie	University of Reading	University of Reading	0
Manual	Bee Biodiversity Assessment: Manual of Field Methods	University of Reading	University of Reading	0
Online library of 520 high quality photos of Congolese bees	Abeilles et guêpes sauvages du Congo Kinshasa	Free University of Brussels	<a href="http://www.flickr.com/photos/90408805@N00/sets/72157613612822302/">http://www.flickr.com/photos/90408805@N00/sets/72157613612822302/</a>	0

## Annex 6 Darwin Contacts

Ref No	15-021
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<b>UK Leader Details</b>	
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Role within Darwin Project	Project Leader
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Fax	
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<b>Partner 2</b>	
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Role within Darwin Project	Local supervisor
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Fax/Tel	
Email	