

Darwin Initiative

Annual Report

1. Darwin Project Information

Project Ref. Number	14-009
Project Title	<i>Biodiversity Monitoring in Forest Ecosystems in Bale Mountains National Park, Ethiopia</i>
Country(ies)	<i>Ethiopia</i>
UK Contractor	<i>University of Aberdeen</i>
Partner Organisation(s)	<i>Bale Mountains National Park (Oromia Bureau of Agriculture and Rural Department, OBARD)</i>
Darwin Grant Value	<i>£155,730</i>
Start/End dates	<i>1 September 2005 / 31 August 2008</i>
Reporting period (1 Apr 200x to 31 Mar 200y) and annual report number (1,2,3..)	<i>1 April 2005 to 31 March 2006 Annual Report Number 1</i>
Project website	<i>www.abdn.ac.uk/~soi637/BaleWebsite/Home.htm</i>
Author(s), date	<i>Michelle A Pinard, 30 April 2006</i>

2. Project Background

This project is located in the Harenna Forest of Bale Mountains National Park (BMNP) in southeastern Ethiopia. BMNP is one of Africa's most important centres of biodiversity and endemism with its expanse of afro-montane habitat and broad altitudinal range. The forest ecosystems are the most diverse in the park yet the least well-known; most research has focused on grasslands and moorlands, particularly on high profile endemic animals such as the Ethiopian wolf (*Simenia simensis*) and the Mountain Nyala (*Tragelaphus buxtoni*). The evergreen forests on the southern and eastern slopes of the massif form the most extensive tract of intact forest in Ethiopia and include cloud forest at the upper altitudes and tropical moist forest at the lower, grading into open, savannah woodland further to the south.

The park has protected status but over 7000 people live within its boundaries. The forest is used by residents for cultivation, livestock grazing, apiculture, collection of bamboo and fuelwood and the management of wild coffee (*Coffea arabica*). The forest is also used seasonally by people living outside the park for grazing and increasingly, cultivation. The Harenna forest system extends beyond the park boundaries to the west, south and east. Much of this extension of the forest is within a National Forest Priority Area, with corresponding legal protection, however, within the last three years there has been a rapid expansion of forest clearance in parts of the forest, particularly for intensified coffee production and Khat production (*Catha edulis*), a psychotropic plant that is a lucrative cash crop.

To date, monitoring of the park biota has been largely driven by externally funded research projects and so has been opportunistic, fragmented and biased to few taxa. Almost no monitoring has been done in the forest, despite the serious nature of the threats and the presence of many Ethiopian endemics (7 bird species and 7 mammal species), the endangered Bale monkey (*Cercopithecus (a.) djamdjamensis*), forest

lions and hunting dogs. The park staff includes three experts (BSc holders) and about 20 scouts; all but one scout are based at the park headquarters in Dinsho, a 5 hour drive from the northernmost part of the forest. The management plan for the park is outdated (from 1986) and includes no guidance to staff as to how they might implement conservation activities. Although there is expertise in Ethiopia that could support programme development, the expertise is scattered across institutions that are physically isolated and poor communication and transportation facilities constrain cooperation.

3. Project Purpose and Outputs

The purpose of the project is to conduct research and to strengthen the capacity of researchers, government agents, and local people to conserve native forest species of plants and animals in the Hareenna Forest in Bale Mountains Park. There are five outputs for the project and these include the following: 1) a monitoring programme for Hareenna forest ecosystem in BMP; 2) a report on the Status of the Hareenna Forest in BMNP; 3) a community awareness programme; 4) a report on the compatibility of indigenous land use management strategies with conservation; and, 5) lessons learned and best practices disseminated. Progress against these outputs is summarized in Appendix 1 and the original logframe is presented in Appendix 2.

The outputs have not been modified in the past year, however, aspects of the operational plan have been modified, as discussed with and approved by the Darwin Secretariat in Nov 05.

Regrettably our main project partner, Mr Fikadu Garedew, died in November 05. The Deputy Park Warden, Mr Addisu Asefa has taken over the position of Warden until the OBARD make a decision about a permanent replacement. As of 31 March 06, no decision had been made. Mr Addisu is now serving as our main project partner.

The second main change to our operational plan is related to staffing, Dr Menassie Gashaw and Mr Girma Mengesha Debsu have swapped roles as described in the project proposal. Mr Girma accepted a position as Lecturer in Wildlife Biology at Wondo Genet College of Forestry (WGCF) rather than the position of Project Coordinator. Dr Gashaw is working as the Project Coordinator. This change has been to our advantage as Dr Gashaw has extensive experience with protected area systems in Ethiopia, he served as the Park Warden of BMNP for 18 months in 1990-1991 and conducted his MSc research in the park.

4. Progress

The project was initiated in September 2005 as a new project, therefore this report covers the first 7 months of the project. Work on the project was delayed by about a month at the start due to the change in the main project partner in the host country. Nevertheless, we have met the first key milestones in our project implementation table. These are as follows:

- The Project Coordinator was appointed in mid-September 2005 (see number 3, above).
- The Project Planning Workshop was held in Addis Ababa in November 2005.
- PRA conducted in March 2006.
- Field-based training for park scouts completed in March 2006.

The Planning Workshop had been planned for Goba, a municipality close to the park. However, during the week preceding the workshop there was political unrest in the country that closed workplaces and restricted travel. In consideration of this, the workshop was delayed and moved from Goba to Addis Ababa, reducing the travelling required for the majority of attendees. At the workshop we had good representation

from all relevant stakeholders and the disruption did not appear to impact negatively on progress made during the workshop.

We purchased a used 4-wheel drive vehicle in November 2005. It took much longer to find and purchase a suitable vehicle than anticipated and this delayed the initiation of planning discussions with local organisations within the districts surrounding the park. We had difficulties in getting money to our project account in Ethiopia during November and December. This was related to administrative bureaucracy both at UA and with the banking system in Ethiopia. These have now been overcome and wire-transfers of money are being affected smoothly.

Under the activity milestones listed in the logframe, the workshop/training events all have been completed as proposed. There has been some slippage in the activities listed under research. The slippage has been due to the development of new opportunities for collaboration with other institutions interested in remotely-sensed data for BMNP and the time-delays associated with an increased level of consultation.

A Participatory Rapid Appraisal was conducted in March 06 with representatives from three settlement areas within park, within the Della Mena woreda. One objective of the PRA was to identify gaps of knowledge in biodiversity resources and conservation of Haremma forest by local communities so as to design strategically community awareness and education programs.

Two field-based training courses were completed for 24 park scouts on forest ecology and methods of identification, sampling and data management for vertebrates (mainly mammals and birds) and plants. A training manual has been produced and is being translated into Amharic.

Bibliographic material and historical data on forest cover in the Haremma has been compiled. Although we have found references to aerial photographs and datasets from previous research projects, to date we have only been able to access one dataset. We will continue to pursue these options as we begin to collect our own data. We will prepare an annotated bibliography of published information on the Haremma forest, with a target completion date of March 07.

In addition to the activities in the logframe, a Memorandum of Understanding has been written for the terms and conditions of the project's interaction with the OBARD and the Wildlife Conservation Department (WCD) (Appendix 3). The WCD is a national governmental agency that provides support to the OBARD in protected area management. As an outcome of the planning workshop, it became clear that the priorities for collaboration between the project and WGCF would be in the training programme, where WGCF was enthusiastic to participate in the training events, as trainers but particularly by providing trainees from the more junior members of their teaching staff.

The project's main achievements during the project's first year include the field-based training for park scouts and the PRA with representatives from settlement areas inside the park within the forest zone.

Training was provided on vertebrates (mainly mammals and birds) and on plants, and included methods and techniques on identification, data collection, and application. Most of the trainees had completed primary school, with few having completed secondary school, thus basic principles and introductory notes were given prior to the basic lessons of identification and data collection on vertebrates and plants as well as the use and application of data for the day to day activities of the rangers.

Training was strategically given for all of park's game scouts into two groups in two consecutive periods. This allowed for half of the park's rangers to be at their posts while the rest of the scouts were attending the course. Training was entirely field-based and took place in the Haremma forest, with a base at Katcha. The course include both theoretical and practical lessons. Theoretical lessons were given at the campsite at Katcha, whereas practical activities were undertaken at different

locations in Hareenna. Training was delivered in local languages (Oromia & Amharic). The course objectives are listed in Appendix 4. Training manuals were prepared in English, and trainers translating these into Amharic language and to distribute it among the trainees in June 2006.

All 24 of the participating scouts passed the course and will be applying their new knowledge during their patrolling duties over the next few months. During the next project year we will conduct an assessment of the effectiveness and impact of the training through interviews with course participants and the head of scouts.

Preliminary discussions were held with woreda and zonal administrators in order to plan the PRA, to identify appropriate settlement areas and to schedule the appraisal. During the PRA, focal group discussions, interviews with key informants and group discussions were used. Participants represented three kebeles within the woreda were selected from various age, sex and wealth categories. A checklist of general questions was used to provide structure to discussions.

The main findings from the PRA are that 1) the long-term settlers in the park are aware of the recent decline in natural resources in the park and feel that this is a threat to their own livelihoods which are dependent on the resources in the park; 2) traditionally access to the forest and exploitation of forest resources by residents in the park was controlled by local institutions in a "Geda" system; the high number of "intruders" into the forest (i.e., recent settlers or seasonal users) has undermined this traditional system, as has the government's lack of recognition of traditional institutions in the villages.

We plan to follow-up with additional PRAs with forest users that live outside the park boundary in order to understand more about their views of the forest and to assess their needs for support in developing greater community awareness of natural resource conservation.

Aspects of the training programme that were outlined in the project proposal, and agreed upon during the project planning workshop, require further consideration before implementation. Specifically, prior to implementing a training programme on modern approaches to protected area management, we propose to conduct further consultation with park management, OBARD and FZS to ensure that the training that we provide is complementary and appropriate to the needs of the scouts and the park, in the context of the new general management plan. In addition, there is a community education project underway in the northern part of BMNP, supported by the Sustainable Development Institute in Addis. We will need to conduct further consultation with OBARD and SDI to ensure that our programme is complementary to on-going work.

Our workplan for 1 April 06 – 31 March 07 is as follows:

- Trial and refine protocols for sampling forest ecosystem and landscape properties, bird and mammal species, collect baseline data June 06 – March 07;
- UA undergraduate expedition scheduled for June/July/August 06
- Conduct additional PRA with members of settlement areas outside the park boundary, Sept/Oct 06;
- Training workshop for park experts and other research biologists on design and analysis of monitoring data and database management Oct/Nov 06
- Conduct analyses of forest cover and forest cover change in the Hareenna, Dec 06;
- Conduct an assessment of the impact of the field-based training provided to scouts on plant and vertebrate identification and sampling methods, Nov 06;
- Conduct an assessment of training needs in relation to scouts and modern approaches to protected area management, Nov 06; implement appropriate training March 07;
- Complete annotated bibliography on the Hareenna forest, March 07;

5. Actions taken in response to previous reviews (if applicable)

Not applicable - this is our first annual report.

6. Partnerships

The Project Leader met with the project team in Ethiopia in October 2005, November 2005 and March 2006. We held the project planning workshop in November, where all partner institutions were represented (OBARD, WGCF, WCD, BMNP), as well as stakeholders from the Frankfurt Zoological Society (FZS), Addis Ababa University (AAU), and the Institute of Biodiversity Conservation (IBC). The collaboration between UA and the host country partners is proceeding without difficulties. OBARD has approved a request for a student expedition from the UA to be based in the park in June/July 06.

The Project Coordinator was invited to participate in the development of a new General Management Plan for BMNP. The work was initiated at a workshop in Addis sponsored by OBARD, FZS and IBC on 5-6 Dec 06. The Coordinator will continue to serve the group working on the plan, participating in two subgroups, one focused on Park Operations and a second focussed on Ecosystem Management. This collaboration will help to ensure that our project develops outputs that are compatible and supportive of the vision for the park and that the knowledge and experience gained in our project is shared widely with stakeholders in protected area management in Ethiopia.

A meeting was held in Addis in January 06 to bring together people with an interest in spatial data and GIS relevant to the BMNP. We were able to participate in this meeting and have been able to develop further collaboration with botanists and GIS experts at AAU. Although the GIS expert at WGCF was on leave during the first part of our project, we look forward to involving him in the next stages of our remote-sensing work.

Additional collaboration is being developed in the production of a "coffee-table" book on BMNP by a French team. They have asked us to provide logistical support and expert knowledge during their field season in June and July and some editorial assistance in the production of the book.

7. Impact and Sustainability

This report comes as our project completes its 7th month. The profile of the project has been promoted by our involvement in the stakeholder analysis for the park that was conducted as a preliminary part of the revision of the general management plan and our participation in the development of the GMP will help to promote the project within the country. Also, with the completion of PRA activities with three settlement areas in the forest, local awareness of the project is increased and discussions with a wider range of local stakeholders have been initiated. There are currently a range of initiatives within the park that are increasing interest and capacity for biodiversity conservation and it would be very difficult to isolate the impact of our project from the other initiatives. However, the training events for the park scouts was followed by a reinstatement of patrolling activities by the scouts in the park, sponsored by FZS. The scouts are enthusiastic to conduct the patrolling and to put into practice the recording guidelines that were discussed during the training.

The training events, planning workshop, and field visits by the project team have each included individuals from the partner institutions, promoting interest in the forest and a greater awareness of the opportunities for research. We are actively pursuing further collaborations with AAU, WCD and WGCF to follow-up on joint research activities. The field base for the project team is at the Katcha campsite within the Hareenna. A sign is being produced for the campsite which will include the Darwin logo.

At this point in time, the priority for a satisfactory exit strategy is to ensure that the monitoring programme is developed in line with the GMP and that the training provided by us during the project is complementary to that being provided by other projects involved.

8. Outputs, Outcomes and Dissemination

None of the main outputs listed in the log frame were scheduled to be completed during the first year of the project. Of the outputs listed in the project output schedule, two week-long training courses were provided for scouts. Each course included teaching material on plants, birds and mammals.

The number of weeks spent in Ethiopia was less than expected during the first year. Principally this is because some of the travel to Ethiopia by the UK partners that was scheduled for year one was postponed to year two because of the delays and scheduling difficulties. In addition, one of the PIs trips to Ethiopia was cut short due to political unrest in the country.

Because we are still in the first stage of the project, dissemination activities have been limited to expanding our network of collaborations within the country. We have not yet sponsored any radio or television broadcasts related to the project.

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

Code No.	Description	Year 1 Total	Year 2 Total	Year 3 Total	Year 4 Total	TOTAL
6A	Park rangers and scouts	24				
6B	Training in forest ecology, monitoring of birds, mammals and plants	2				
8	PIs in Ethiopia	3				

Table 2: Publications

Type *	Detail	Publishers	Available from	Cost £
	None to date			

9. Project Expenditure

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

10. Monitoring, Evaluation and Lessons

Our partner institutions have requested that we report quarterly to them on our progress against outputs and activities. In addition to this, we intend to assess the impacts of the training programme by interviewing a sample of the trainees 6-12 months post-training to gain feedback on the relevance of the training provided.

Because we are still early in our programme of activities, it is not possible to discuss how the outputs and outcomes contribute to the project purpose.

Lessons learned during the first project year are 1) because there are a number of initiatives underway in BMNP, one providing some training to scouts and experts, one providing some community-based education, and one that includes a significant GIS component for land use mapping, it is essential that we continue to network with these projects and institutions to ensure that our project activities are complementary and well-targeted. In addition, developments in the new general management plan for the park will continue to be relevant to our project planning and implementation programme. Finally, information about the traditional system of controlling access to the forest that was in place in the Harena in the not so distant past suggests that it may be possible to support the communities in order to re-institute this tradition.

Appendix 1 Report of progress and achievements against Logical Framework for Financial Year: 2005/2006

Project summary	Measurable Indicators	Progress and Achievements April 2005-Mar 2006	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>The purpose of the project is to conduct research and to strengthen the capacity of researchers, park managers and other government agents, and local people to protect native forest species of plants and animals in BMP.</p>	<p>Biodiversity monitoring programme for Hareenna forest in place and functioning by yr 3.</p> <p>New knowledge on biodiversity in Hareenna forest ecosystem in BMP, particularly vascular plants and vertebrates and landscape structure and composition.</p> <p>Awareness of communities on the role of protected areas strengthened and the awareness of park staff on participatory approaches to resource management strengthened.</p> <p>New knowledge on the compatibility of various indigenous land management strategies with conservation objectives.</p>		
<p>Outputs</p>			
<p>Monitoring programme for Hareenna forest ecosystem in BMP established and functioning through three partner institutions</p>	<p>Minimum of 20 staff from partner institutions trained by year 3 in sampling protocols, data analysis, and database maintenance.</p>	<p>Project planning workshop completed in Nov 05; agreed priorities for monitoring and training, identified additional opportunities for</p>	<p>Training course for park experts in design, analysis and management of monitoring data scheduled for Oct/Nov 06</p>

	Sampling protocols elaborated and tested by year 2.	collaboration for the training and research. Field-based training for 24 park scouts on forest ecology, sampling methods and data recording for mammals; birds and plants completed in March 06. Assessment of training needs for park experts completed in March 06.	Trial and refine protocols for sampling forest ecosystem and landscape properties, bird and mammal species, collect baseline data June 06 – March 07;
Report on the Status of the Harena Forest in BMP published and distributed	Report peer-reviewed and publication date established, distribution arrangements in place. 300 copies produced and distributed by y 3.	Bibliographic material, vegetation maps and GIS data for the forest compiled. Potential source of Landsat images of the forest identified and new collaborations made with botanists at Addis Ababa University.	Assess utility of Landsat images for spatial and landscape analyses on forest cover and forest cover change. Supplement these with ground-based sampling.
Community awareness programme established and functioning through three partner institutions	Participatory appraisal conducted and results discussed. Curriculum materials developed and tested by y 2. At least 10 teachers trained in the use of education materials. At least 15 scouts and rangers trained in the fundamentals of participatory resource management.	PRAs conducted with residents from three settlement areas within the park.	Additional PRA scheduled for Sept with residents from three settlement areas outside the park boundary (near Angetu, where many residents are seasonal users of the forest)
Report on the Compatibility of Indigenous Land Use Management Strategies with Conservation	Report peer-reviewed and publication date established, distribution arrangements in place. 300 copies	Research priorities identified and agreed with project partners, Nov 05.	Research projects to be initiated 1. forest structure and wild coffee

	produced and distributed by y 3.		<p>management;</p> <ol style="list-style-type: none"> 2. population structure of <i>Aningeria</i> species, tree species used for hive construction; 3. relationship between forest openness and soil attributes in the 2,500 -3,000 m belt 4. initiation of grazing impact studies
Lessons learned and best practices disseminated	<p>1 Booklet on monitoring forest ecosystems produced</p> <p>1 Booklet on the livelihood strategies and their compatibility with forest conservation</p> <p>2 posters produced</p> <p>2 papers submitted for publication in scientific journals</p>		

Appendix 2. Original Logical Framework

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</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 benefits arising out of the utilisation of genetic resources 			
<p>Purpose</p> <p>The purpose of the project is to conduct research and to strengthen the capacity of researchers, park managers and other government agents, and local people to protect native forest species of plants and animals in BMP.</p>	<p>Biodiversity monitoring programme for Hareenna forest in place and functioning by yr 3.</p> <p>New knowledge on biodiversity in Hareenna forest ecosystem in BMP, particularly vascular plants and vertebrates and landscape structure and composition.</p> <p>Awareness of communities on the role of protected areas strengthened and the awareness of park staff on participatory approaches to resource management strengthened.</p> <p>New knowledge on the compatibility of various indigenous land management strategies with conservation objectives.</p>	<p>Field survey reports and publications by partner organisations.</p>	<p>Government policies and programmes remain supportive of conservation work in BMP; Oromia Agriculture and Rural Land Development Bureau, BMP, Wondo Genet College of Forestry remain viable and committed.</p>
<p>Outputs</p> <p>Monitoring programme for Hareenna forest ecosystem in BMP established and functioning through three partner institutions</p>	<p>Minimum of 20 staff from partner institutions trained by year 3 in sampling protocols, data analysis, and database maintenance.</p> <p>Sampling protocols elaborated and tested by year 2.</p>	<p>Field reports</p> <p>Database with biodiversity data (vascular plants and vertebrates) with associated manual.</p> <p>Participant attendance records.</p>	<p>Trained staff remain in institutions and in positions where they can use the skills provided and train others in the skills.</p>

Report on the Status of the Harena Forest in BMP published and distributed	Report peer-reviewed and publication date established, distribution arrangements in place. 300 copies produced and distributed by y 3.	Published reviews and feedback on report. 2 copies sent to Darwin Initiative	
Community awareness programme established and functioning through three partner institutions	Participatory appraisal conducted and results discussed. Curriculum materials developed and tested by y 2. At least 10 teachers trained in the use of education materials. At least 15 scouts and rangers trained in the fundamentals of participatory resource management.	Local meeting reports. Published materials. Participant attendance records.	Users and relevant stakeholders are willing and able to participate in the process to develop agreements and protocols.
Report on the Compatibility of Indigenous Land Use Management Strategies with Conservation	Report peer-reviewed and publication date established, distribution arrangements in place. 300 copies produced and distributed by y 3.	Published reviews and feedback on report. 2 copies sent to Darwin Initiative	
Lessons learned and best practices disseminated	1 Booklet on monitoring forest ecosystems produced 1 Booklet on the livelihood strategies and their compatibility with forest conservation 2 posters produced 2 papers submitted for publication in scientific journals		Materials reach and positively influence intended stakeholders.
Activities	Activity Milestones (Summary of Project Implementation Timetable)		

Workshops / Training Events	<p>Yr 1: Project planning workshop with project team to agree workplan, define training programme;</p> <p>Yr 1: Field-based training (1) mammals; (2) birds; (3) plants followed by data management training;</p> <p>Yr 2: Training workshop on (1) experimental design and research proposal writing, and (2) modern approaches to protected area management;</p> <p>Yr 2: Training workshop for educators on the protected areas;</p> <p>Yr 3: Final workshop, for dissemination and work on publications</p>
Research	<p>Yr 1: Collate historical data on forest cover in the park, including satellite data from the national Woody Biomass Project, conduct spatial and landscape analyses on forest cover and forest cover change.</p> <p>Yr 1: Develop and implement protocols for sampling vascular plants, birds, mammals, ecosystem and landscape structure and function; develop database structure.</p> <p>Yr 1: Conduct PRA in at least two settlement areas within the park to determine needs and priorities for community awareness programme.</p> <p>Yr 2: Complete baseline data collection, process material, digitise data and conduct preliminary analyses on vertebrate and plant diversity.</p> <p>Yr 3: Conduct field research on the impacts indigenous land management activities on forest ecosystem processes.</p> <p>Yr 3: Complete analysis of baseline data and revise monitoring plan and database as needed</p>

Appendix 3. Memorandum of Understanding

MEMORANDUM OF UNDERSTANDING BETWEEN THE ETHIOPIAN WILDLIFE CONSERVATION DEPARTMENT, OROMIA AGRICULTURE and RURAL DEVELOPMENT BUREAU and THE DARWIN INITIATIVE PROJECT ON BIODIVERSITY MONITORING in FOREST ECOSYSTEM in BALE MOUNTAINS NATIONAL PARK, ETHIOPIA.

Whereas, the Darwin Initiative Project has submitted a project proposal and is ready to provide the necessary funds and to implement the project entitled “Biodiversity Monitoring in Forest Ecosystems in Bale Mountains National Park, Hareenna, Ethiopia (herein after referred as the project);

Whereas, the Oromia Bureau of Agriculture and Rural Development (herein after referred to as the OBARD), and the Wildlife Conservation Department (herein after referred to as the WCD) have endorsed and are committed to facilitate the implementation of the project.

Recognizing the need to conserve and develop the biodiversity resources of Hareenna forest, which is of great economic, ecological, cultural and social values, and represents an irreplaceable part of the heritage of Ethiopia and humankind as a whole;

Desirous of establishing a framework for cooperation in conservation and rehabilitation of the natural resources;

Now therefore, the parties hereto have committed themselves into making the following agreement as stipulated hereunder:

Article 1

Project Description, Location and Purpose

1.1. The project as described in the project document is the “Bale Mountains Conservation Project” and is attached herewith as an appendix and it is an integral part of this agreement. The project is a new initiative by a group of local and overseas scientists, which is funded by the Darwin Initiative Project (REF 356). There are no similar efforts being carried out to develop monitoring and training programmes in the Hareenna forest. Although the biodiversity wealth of Hareenna forest is not yet thoroughly studied, it is considered as the richest site in terms of the various ecosystems and community types. Besides the forest is vitally important in terms of its value as water catchments, which the livelihood of millions of people living in the surrounding lowland areas is dependent on it. However, there is a huge knowledge gap, and it is one of the most threatened forests in the country, particularly due to the recent influx of settlers. Paradoxically, there are limited efforts undertaken to conserve and manage the forest.

1.2. The project is located, and is to be implemented in and around the Bale Mountains National Park (BMNP), in Oromia Region, Bale Zone.

1.3. The major purpose of the project is to strengthen the capacity of park managers, researchers, government agents and local community to protect one of the remnant forest ecosystems of the country, i.e. Hareenna forest in the BMNP, Ethiopia.

Article 2

Obligations of the Darwin Initiative Project

The project:

2.1. Shall provide opportunities for strengthening the capacity of the BMNP and ORAD staff working in the surrounding district, and assist the conservation of the BMNP by providing technical advice, equipment and support in fund-raising. The project budget requires annual approval from the Darwin Initiative Project office in UK – based on successful completion of the previous year’s objectives and activities. The 2005/2006 budget an amount of 51,286 GBP is approved to be incurred in the physical year ending 31 March 2006.

2.2. Shall employ one Project Coordinator to be responsible for liaison between the Darwin Initiative Project, OBARD and WCD and for the implementation of project activities.

2.3. Shall ensure the implementation of the following major activities:

2.3.1. Capacity of OBARD staff working in BMNP and in the project’s surrounding districts strengthened;

2.3.2. Monitoring program for Hareenna forest ecosystem in BMNP established;

2.3.3. Collate historical data on forest cover in the park, including satellite, conduct spatial and landscape analyses on forest cover and forest cover change.

2.3.4. Develop and implement protocols for sampling vascular plants, birds, mammals, ecosystem and landscape structure and function; develop database structure;

2.3.5. Conduct PRA in at least two settlement areas within the park to determine needs and priorities for community awareness program;

2.3.6. Complete baseline data collection, process material, digitize data and conduct preliminary analyses on vertebrate and plant diversity;

- 2.3.7. Conduct field research on the impacts of indigenous land management activities on forest ecosystem processes;
- 2.3.8. Develop educational materials for communities and schools about protected areas and impacts of grazing, fire and forest clearance;
- 2.3.9. Prepare booklet on livelihood strategies and their compatibility with forest conservation objectives.
- 2.4. Shall ensure the proper utilization of project equipment and materials.
- 2.5. Shall report quarterly to OBARD and WCD about the performances of the project.
- 2.6. Shall facilitate a mid-term and other periodic evaluations by OBARD and WCD.
- 2.7. Shall ensure that its personnel do not engage in any activity incompatible with the purposes and objectives of this agreement, or contrary to the laws and regulations of the Federal Democratic Republic of Ethiopia.
- 2.8. Shall hand over the project activities with related equipment and materials upon the termination of the project to the relevant line department.

Article 3

Obligations of Oromia Bureau of Agriculture and Rural Development and Wildlife Conservation Department

OBARD & WCD:

- 3.1. Shall provide the implementing party with the necessary technical advice.
- 3.2. Shall cooperate with the Darwin Initiative Project in the realization of the project objectives.
- 3.3. Shall follow-up and evaluate the project activities.
- 3.4. Shall waive park fees for the project personnel, short and long-term technical advisors and sponsors visiting project areas.
- 3.5. Shall facilitate the hosting of sponsors, short and long-term technical advisors and other project staff who may visit project areas.
- 3.6. As per the decision reached at the expiry of the project, shall take over the project activities with related equipment and materials upon the termination of the project.

Article 4

Research and Publications

- 4.1. The project shall keep OBARD and WCD informed on research and publications and developments relating thereto.
- 4.2. Publications and research findings arising in connection with the implementation of the project under this agreement shall be acknowledged to OBARD, WCD and the Darwin Initiative Project.

Article 5

Liabilities

- 5.1. Subject to the provision of this agreement, no party shall be liable to compensation by any party in respect to any claims, debits or damages arising out of the implementation of this project, and,
- 5.2. Where the employee of any party to this agreement is injured, disabled, killed or has any other claims in the course of her/his employment in this project, the party employing her/him shall be solely responsible in respect of all claims that may arise there-from.

Article 6

Amendment, Duration and Effective Date

- 6.1. This Agreement shall enter into force when duly signed by the parties, and come into effect from the date of signature.
- 6.2. This Memorandum of Understanding will last for the duration of the Darwin Initiative Project present funding phase from 1 September 2005 to 2008/09 and thus, for a period of 3 years.
- 6.3. The monitoring and training programs designed in this project should not be interrupted after the phase out of the project. Therefore, there is no foreseeable end to this program, while this program is regarded as a long-term program and an extension beyond 2008/09 will be sought upon the mutual consent of the parties hereto, provided that there is the availability of funding.
- 6.4. This Agreement may be terminated by either contracting party giving six (6) months prior written notice of termination to the other contracting party.

IN WITNESS WHEREOF, the parties hereto acting through their duly authorized official representatives have hereby affixed their respective signatures and seals, on the date specified below.

This Agreement is made this.....day of2005

For and on behalf of OBARD

Signature: _____
Name: _____
Title: _____
Place: _____
Date: _____

For and on behalf of WCD

Signature: _____
Name: _____
Title: _____
Place: _____
Date: _____

For and on behalf of Darwin Initiative Project

Signature: _____
Name: _____
Title: _____
Place: _____
Date: _____

Appendix 4. Learning objectives for the training Course in Plant and Vertebrate Identification and Sampling Methods in the Harena Forest in BMNP.

At the end of the course, the trainees should be able to:

- ✚ Understand the characteristic and adaptive features of the various groups of vertebrates found in the forest,
- ✚ Explain the reasons why vertebrates are so important in terms of biodiversity conservation in the Harena,
- ✚ Identify the various groups of vertebrates found in BMNP,
- ✚ Make use of various techniques and equipment to identify and collect information from the various groups of vertebrates found in BMNP,
- ✚ Identify variables that can be recorded during patrolling outings that are relevant to the monitoring of vertebrate populations, their habitats, and the plants found therein,
- ✚ Identify the various wildlife habitats, major land features, dominant plant species, community and ecosystem types,
- ✚ Explain the major roles of plants in maintaining ecosystem functions,
- ✚ Describe the distribution and abundance of wildlife across different biogeographic regions,
- ✚ Make use of the various techniques and equipments to identify plants, build a small herbarium, and to assess and evaluate the various habitat types found in BMNP.

Appendix 5. Summary of Results of Focal Group Discussions (FGD)

Discussants explained that there used to be lots of big game in Hareenna forest many years ago, i.e. some 40 years ago such as Elephants, Buffaloes, and Oryx. However, these animals are not anymore present due to habitat loss and human interference. The trend in natural resources is one of decline, and the situation is getting worse under the present government. Wildlife habitat and plant cover used to be diverse and intact many years ago. Species like wild coffee produced much yield at that time as cover or shade was good. In contrast, the wild coffee at present does not give harvest every year as a result of decrease in plant cover and intensive human disturbances or resource uses. Discussants further explained that even though the biodiversity resources of Hareenna forest are alarmingly depleted, still the flora and faunal resources are rich at present. Participants have listed out the major faunal and flora resources of Hareenna forest.

In line to this, the group discussed the various values of biodiversity resources of the area such as:

- Timber tree species used for construction purposes such as *Cordia Africana*, *Afrocarpus falcatus*, *Aningeria* spp. etc.
- Vines or lianas used for various purposes as rope, paint, to start fire (as matches), etc.
- Fruits such as *Rubus* spp and other palatable plants from the forest are important foods supply specially during dry seasons, similarly local people are highly dependent on the forest for forage and shelter during the dry season as there is shortage of forage during dry season outside the forest in the open woodland and grasslands,
- Considerable number of plants in the Hareenna forest are used as herbal medicine by Local communities,
- More than 4 rivers namely Erba, Welmel, Nore and Quabaehana arise from the montane forest serve as important water resources, participants underscored the importance of montane forest in serving as watershed.

Participants further discussed that livelihood of local community is strongly dependent on the biodiversity resources and ecological processes within Hareenna forest.

Regarding to what extent the local people are dependent on the forest resources, there was an extended discussion that people are come to settle in the forest temporarily during the dry season for the various purposes mentioned above. The most important part of the discussion in connection to resource use scheme is that resource use within Hareenna forest is on seasonal as well as regulatory basis. Interestingly, few decades ago there used to be a local or traditional system to control resources use schemes from Hareenna forest. This particular system allows temporary settlement particularly during the peak of dry season and controls the extent and method of resource uses during that period. Across the forest, i.e. from west to east and north to south, there were 12 forest gates or entrances controlled forest guards recruited from local people. These forest guards are mainly elder and respected people are making up the system and fully empowered by the local community. The system has got its own guiding principles and rules to govern or rule people while staying within the forest. Thus the elders who make up the system have full power and responsible to manage the people living within the forest. For instance, illegal people are punished in a number of ways such as fined, or cattle confiscated etc depending upon the kind and degree of offense. The elders are somehow autonomous in making decision as they are empowered by the local communities and are also acknowledged by the district conventional rules or legislation.

Once entered into the forest the settlers are stayed and abided by the system. People who come to settle during dry seasons are not allowed to cut trees to construct houses or build houses rather stay in a form of "house" like natural shelter, which in local language called "Darra" Darra is the place, which naturally formed by various species of lianas or vines and stranglers to form a natural shelter or "housing" for human beings as well as livestock.

Unfortunately this traditional system is aborted and it does not exist at present. According to the discussants, the main reason is during change of governments the

elders have started to lose their autonomous power and particularly lost the recognition by the local government and even gradually ignored by everybody.

- Outcomes of the FGD

1. There are two kinds of settlers within and surrounding Harena forest: those who live with the forest for long and those who are recently encroached into the forest.
2. Those who settle temporarily in the forest at least on seasonal basis are the ones who lived with the forest for long period of time or have a long history of presence in Harena forest, seemed environmentally friendly and not having major impact on the forest.
3. However, the recently settled ones are those who settled in the forest permanently that means all year round, and proved to have severe impact or threat on the forest biodiversity resources.
4. Loss of sense of ownership to forest resources by local communities happened after the elder or local system is broken, and particularly, when local people have realized the government is paying very little attention to forest destruction and biodiversity loses, and weak forest administration or management.
5. Taking advantage of the weak management both kinds of settlers are now competing for the forest's exceptional biodiversity values, as if pretending the forest is no mans land.
6. Discussants strongly recommended reviving the broken system is the best solution to save the last remnant biodiversity resources of the forest.
7. Regardless to this, the settlers who have been living with the forest for long have a considerable knowledge of the forest, and still have shown interest and readiness to support conservation programs, particularly conservation education or awareness programs.
8. Conservation education and awareness programs should be designed to bring behavioral changes among local communities and has to be coupled with practical or skill training in the context of finding alternative options and improving livelihoods.