

# Darwin Initiative – Final Report

(To be completed with reference to the Reporting Guidance Notes for Project Leaders  
(<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                   | 17028   |
| Project Title                       | Conserving the Ruipa Corridor: facilitating cohesive management between diverse stakeholders. |
| Host country(ies)                   | Tanzania  |
| UK Contract Holder Institution      | The Society for Environmental Exploration   |
| UK Partner Institution(s)           |   |
| Host Country Partner Institution(s) | The University of Dar es Salaam   |
| Darwin Grant Value                  | £128,735.00   |
| Start/End dates of Project          | 1 <sup>st</sup> June 2009   |
| Project Leader Name                 | Sam Lloyd   |
| Project Website                     | <a href="http://www.frontier.ac.uk">www.frontier.ac.uk</a>                                    |
| Report Author(s) and date           | Sam Lloyd   |

## 1 Project Background

The Kilombero Valley is situated between the Selous Game Reserve and the Udzungwa Mountains and is an integral part of the Greater Selous Ecosystem (WWF 1992). The valley is of national importance to conservation and water management (WWF 1992), is a migratory route for many large mammal species, and was designated as a Ramsar site in 2002. It is also home to one of the largest individual populations of the puku antelope (*Kobus vardonii*), one of only two populations in Tanzania (Starkey et al. 2002, Bonington et al. 2009).

However, the valley has little or no protected status, with parts receiving marginal protection as a Game Controlled Area (GCA) and as Forest Reserves. Immigration has proliferated over the past decade due to the fertility of the region, the availability of grazing land for pastoralists and increased infrastructure through the area, including the TAZARA railway. This has led to extensive habitat fragmentation and degradation which has closed the majority of traditional migratory routes for large mammals within the last twenty years, leaving only two remaining viable corridors between Selous and Udzungwa: the Nyanganje Corridor and the Ruipa Corridor (Jones et al, 2007). In addition, during the wet season, when the valley is flooded, there are few remaining refuges for wildlife on higher ground, leading to increased incidences of human-wildlife conflict.

Preliminary work carried out by Frontier-Tanzania (FT) in 2006-2008 indicated that the Ruipa Corridor had suffered extensive human encroachment and habitat degradation but despite this is still used by migratory species, as well as being an important site for biodiversity within the Valley (FT 2008). However, unless decisive action is taken, ongoing habitat degradation could result in a complete loss of connectivity between the ecosystems within only a few years (Jones et al, 2007). This will be devastating to the populations of large mammals as well as to the unique biodiversity found within the valley. Furthermore, if migration routes are disrupted this will exacerbate human-wildlife conflict in areas around the former routes (Jones et al, 2007; FT 2008).

The Corridor has a complex matrix of stakeholder ownership with villages in two districts, Kilombero District and Ulanga District; private land ownership by the Kilombero Valley Teak Company (KVTC) and Kilombero Valley Farms; a GCA managed by the Wildlife Division; and hunting blocks on the boundary of the Selous Game Reserve and in the GCA managed by private hunting companies. The Frontier-Tanzania Ruipa Corridor project was undertaken to establish collaboration amongst stakeholders in order to reduce negative anthropogenic impacts and prevent the loss of the area's biodiversity and major large mammal populations.

The Frontier-Tanzania Ruipa Corridor base camp is situated in the village of Igota in Ulanga District, having been relocated from the previous site in January 2011. The camp is on the main road between Ifakara and Mahenge, and is approximately 25 km from the boundary of the Selous Game Reserve.

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

This project made important contributions to the delivery of CBD in Tanzania. Participatory land management planning (LMP) and capacity building, detailed in section 4.6, will ensure that these contributions are long lasting. An important part of the LMP is ensuring sustainable use, article 10. The capacity building (workshops, BTECs, student training etc) contributes to article 12 (scientific and technical education) and article 13 (public education and awareness). The research conducted on the corridor has contributed to article 7 (Identification and monitoring of biological diversity). The public workshops have also contributed to article 13 by increasing public awareness and knowledge of conservation issues. Through the combination of these contributions this project has also contributed to article 8, in situ conservation.

This project has also supported the Convention on Migratory Species by aiming to protect migratory routes.

## **3 Project Partnerships**

The Society for Environmental Exploration (SEE) / Frontier has a long-standing relationship with host country partners at the University of Dar es Salaam (UDSM). The University is surveying and mapping the flora and fauna of Tanzania, and is conducting research into the maintenance and improvement of the environment and the sustainable exploitation of Tanzania's natural resources. Frontier and UDSM have been conducting collaborative research into environmental issues since July 1989 under the title of Frontier-Tanzania, one component of which is the Tanzania Savanna Programme, based in the Kilombero Valley. SEE / Frontier have continued to report on the Ruipa Corridor Project's findings to the university, who have remained very supportive of the programme and have continued to offer technical advice and guidance. Regular meetings have been held between Frontier-Tanzania's in-country team and contacts at UDSM. As part of this relationship SEE staff have given lectures on Frontier Tanzania's work on the Ruipa Corridor. Further to this 7 UDSM students spent between 4 and 10 weeks working on the project being taught practical conservation skills. 2 of these students also completed BTEC qualifications. The student program has been so successful we are fundraising to expand it to our marine project.

Frontier Tanzania has worked continuously with the Ulanga District Council (UDC) for over 10 years. The collaboration between SEE and UDC has become considerably stronger through the course of this project, largely through working closely together to develop LMP. Through this collaboration new and improved methods for participatory planning were developed. Based upon this success SEE were then invited to advise on the development of many other LMPs and we have combined resources for minor projects on many occasions. In addition to this we now coordinate our research with their management team, ensuring our research will directly benefit their management of the regions natural resources. As a direct result of the DI project we are working together to find funding to help local communities develop a WMA.

We have also been working with a longstanding collaborator, the Kilombero Valley Teak Company (KVTC). This conservation friendly company, majority owned by GEF, have 24,000ha of conservation land, 15,000ha of which connect the corridors gazetted on village land to the Kilombero flood plains making it an essential part of the Ruipa Corridor. Whilst previous collaborations have been small scale, in 2011 KVTC funded an extensive conservation survey of their land. This survey, conducted by Frontier, assessed large mammal movements, human impact, habitat and tree flora. The results of this survey are being used to guide KVTC's active management of the natural woodland. Based on the success of this project we are now working with KVTC to plan a long term monitoring scheme.

## **4 Project Achievements**

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

This project has had a number of positive tangible impacts on the biodiversity and rate of habitat loss in the area.

The clearest effect has been that of the LMPs developed for four villages. These plans will have a range of significant effects. The plans will organise village development, designating areas for separate uses which in turn allows them to limit degradation of local woodland and maximise the benefit of facilities such as schools. These plans have also given these communities the ability to manage their natural resources. Finally the plans also give the village council the legal right to relocate people settling in designated forest areas, where as previously they had very little power to protect the Selous buffer zones.

Most importantly however the LMPs protect wildlife corridors that help large mammals to cross the Mahenge-Ifakara road. Two corridors, one 1.25km wide and one 2km (with a bottleneck of 900m for 900m) cross the road. These corridors connect the Selous to the Kilombero Ramsar Site, allowing large mammals to pass between these two areas.

Further to these protection benefits, the workshops, BTECs and general assemblies have resulted in a marked increase in environmental awareness. This increased awareness has resulted in a large social benefit, a widespread enthusiasm for wildlife management areas (wildlife management areas or WMAs are community run hunting blocks or tourist areas). Community run hunting blocks have been proposed in the area for some time although previously there had been no progress in gazettement. The LMPs however have designated the areas for WMAs, giving them a first level of protection and also constituting the first step in achieving official status.

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

This project has had a significant impact on the conservation of the region. Whilst the Kilombero is suffering widespread degradation, this project has had a noticeable impact by protecting corridors vital to large mammal movement. Unfortunately poaching and human wildlife conflict have brought an end to the annual migration although there is evidence that large mammals are still moving through the area. Through working with a swathe of stakeholders we have managed to protect corridors essential to connecting the Selous to the Kilombero Ramsar Site. We have unfortunately been ill equipped to deal with immigrant pastoralists and poaching which, whilst a problem in the Selous-Kilombero side of the corridor, are the central issues in the Udzungwa-Kilombero side of the corridor. As this is essentially a law enforcement problem as opposed to a land management problem we are forced to rely on the district council to combat this threat.

There have been noticeable changes in local attitudes to wildlife as a direct result of this project. A common comment at the workshops and assemblies has been the increase in

enthusiasm for WMAs. Behaviours have also been changed; farms are being relocated to allow areas of the corridor to regenerate, KVTC are adapting their natural woodland management based on our research and the UDC have adapted management techniques to include greater participation and better management of natural resources.

### **4.3 Outputs (and activities)**

This project has successfully produced all of the outputs originally planned.

1. The first output was to significantly improve knowledge of the Ruipa Corridor in terms of biodiversity, mammal migration and land use. The report by A. Bamford and D. Ferrol-Shulte details the results of their research into the corridor. These results were disseminated to stakeholders through a series of meetings and highly popular workshops. They were also shared with the scientific community at a conference in Arusha as well as being made permanently available on the Frontier website. Finally the results are in the process of being published.
2. The second output was to develop “comprehensive management plans” with the participation and agreement of each of the key stakeholders based upon updated knowledge of the biology and threats. Plans have been produced for four villages with all stakeholders consulted and involved in the process. They have also been signed and made legally binding.
3. Through workshops, BTECs and direct training we have raised the profile of environmental issues in the area as well as increasing both local and national capacity. We have also arranged for representatives from the Miombo Beekeepers Association to visit the villages and provide lessons on beekeeping.
4. We have trained 10 representatives of key stakeholders in monitoring techniques; all 10 obtained BTEC qualifications. We also trained many stakeholders in the mapping techniques needed for monitoring LMPs.

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

See Annex 5.

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

Developing understanding of the Ruipa Corridor required considerable research effort into a wide range of topics. The field work was conducted by SEE however UDSM staff were involved in the process and provided advice and guidance. The main scientific achievement has been the research detailed in the report and subsequent peer reviewed paper by A. Bamford et al. This research represents a holistic evaluation of the current state of the corridor investigating large mammal movements, socioeconomic factors and threats. Large mammal movements were investigated using large mammal transects (LMTs) whilst social research was conducted using directed interviews. This research concluded that whilst the migration was no longer occurring, there was still movement of large mammals across the southern half of the corridor at least.

In addition to this extensive research was conducted on the conservation health of KVTCs natural woodland. All human impacts were logged and data on habitat, tree species and large mammals were collected in quadrats arranged in a 250m grid over the land. Through this we then mapped distributions. This research combined with previous work shows that large mammals still extensively use areas on both sides of the village corridors gazetted through the LMPs.

### **4.6 Capacity building**

Capacity building has been central to this project. We trained local stakeholders, with 10 people achieving BTECs in biodiversity and conservation. A benefit of this local capacity building is

that it increases local understanding of conservation values. Many of these participants have subsequently been hired by us or used their GPS and mapping skills to map the villages in the development of the LMPs.

Added to this increase in local capacity we also invested in the capacity of local village councils and the district council. LMP was a central part of our work and whilst the district council was proficient at the development aspects, they had less experience in participatory methods and conservation issues. In the process of developing the LMPs we taught district council staff a more participatory planning method which has now been taken on as the standard method. We also improved their knowledge of a range of conservation issues which are now taken into consideration when developing plans.

As mentioned previously, as part of our ongoing collaboration with UDSM we have given 7 students practical conservation experience. This training is expected to continue into the future and based on its success we are seeking funding to expand this to our marine project. We have also given lectures on our work at UDSM and plan to continue doing this in the future.

Finally Frontier is by its very nature a capacity building organisation, 61 volunteers have been trained in the course of this project.

#### **4.7 Sustainability and Legacy**

There are a number of outcomes of this project which will have enduring effects. The LMPs developed for the participating villages are 10 year plans, meaning they will be in effect until 2022. 65 signs have been made and installed to indicate boundaries together with large signs explaining the plans. There is evidence of respect for official signs in the area and so it is expected that these signs will increase adherence to the plans. As they protect the corridors that allow large mammals to cross the Ifakara-Mahenge road this will hopefully protect this section of the corridor in the long term. The plans also protect the proposed WMA area that forms the buffer zone of the Selous. This is important as this area has the potential to become a successful WMA.

This project has also developed some strong partnerships which are likely to endure in the long term. The development of LMPs allowed Frontier staff to work closely with UDC staff. Since then we have been working together closely to direct research to benefit UDC's management abilities and to obtain further funding.

The partnership with KVTC has been an important outcome of this project. The conservation assessment of their land was highly successful and will guide their management of the land for many years to come. Their ownership of a significant part of the corridor, combined with the areas protected in the villages will ensure a connection between the Selous and the Kilombero Ramsar Site will endure. In addition to this they have agreed to fund the Frontier Tanzania Savanna project for a further three years.

Finally the longstanding connection with UDSM, developed by this project, is expected to continue into the future. With Frontier providing field staff, practical training and lectures whilst UDSM provides experts in a range of fields, this is a strong partnership which will likely be beneficial to both parties in the future.

### **5 Lessons learned, dissemination and communication**

The results of this project have been communicated through a wide range of mediums. The work is publicised online; the report written by A. Bamford et al is available on the Frontier website and the Frontier Tanzania Savanna work is regularly referenced on the Frontier blog and facebook pages. The work has also been disseminated through lectures; Sam Lloyd and Elise Belle have both given lectures on BSc and MSc courses in the UK.

In Tanzania the work has been disseminated to scientific audiences through a conference in Arusha and through a lecture at UDSM. The work has been communicated to the UDC and

KVTC through our regular meetings. Other stakeholders, such as the village people and local councils have been informed of our work through general assemblies and workshops.

After the completion of this project the online dissemination and promotion will continue indefinitely and as we will continue to work in the area on related topics, the legacy of this project will be widely disseminated.

## 5.1 Darwin identity

The DI identity has been publicised in many ways. The logo is present on all reports and papers published. In addition the logo is present on the signposts used to indicate the LMPs. The Darwin logo is also included on presentations given on a number of degree courses in both the UK and Tanzania. Finally there has been a significant online presence; the DI logo is on the front page of the Frontier website and the project receives regular publicity on a wide range of online mediums.

## 6 Monitoring and evaluation

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

The M&E system has been a useful process for re-evaluating the direction of the project.

The participatory nature of this project has meant that reviews, potential obstacles and opportunities have been discussed with stakeholders throughout the project. For example, throughout the project field staff have been in constant communication with UDC staff, meeting at least once per fortnight. The convenient location of the field camp in one of the participating villages and close to the other three has also meant that there have been also been regular meetings with village leaders. Finally as part of the collaboration with KVTC, Frontier staff have met with KVTC staff fortnightly or more often as required. As a result of this high level of communication the project has been very robust in terms of adapting to changing situations.

## 7 Finance and administration

### 7.1 Project expenditure

| Item                                | Budget (please indicate which document you refer to if other than your project application or annual grant offer letter) (£) | Expenditure (£) | Variance/ Comments |
|-------------------------------------|--|-----------------|--------------------|
| Staff costs specified by individual |  |                 | 0.00%              |
| Overhead costs                      |  |                 | +0.13%             |

|                        |  |               |
|------------------------|--|---------------|
|                        |  |               |
| Travel and subsistence |  | +0.04%        |
| Operating costs        |  | 0.00%         |
| <b>TOTAL</b>           |  | <b>+0.05%</b> |

## 7.2 Additional funds or in-kind contributions secured

- KVTC Natural Woodland Survey  
 Length: 6.5 months (first 2 phases)  
 Value: 15,126GBP  
 Project Summary: The purpose of this work is to classify and map the woodland blocks within KVTC's landholding in the Kilombero Valley, and to assess the health and conservation status of each. Based on this information, recommendations will be made to KVTC on possible land management strategies and methods of preserving biodiversity and ecosystem health.

## 7.3 Value of DI funding

The DI funding has added great value to the host country in terms of knowledge of biodiversity, mammal migration and land use of the Ruipa Corridor. With this information and knowledge the project has successfully developed land management plans which has incorporated Ulanga District Council and improved their knowledge of human – wildlife conflict in the area. Further to this knowledge has been bought into the area in the form of participatory workshops, BTEC training and field survey training for local stakeholders in addition to 10 local representatives passing a BTEC Certificate in Tropical Habitat Conservation.

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

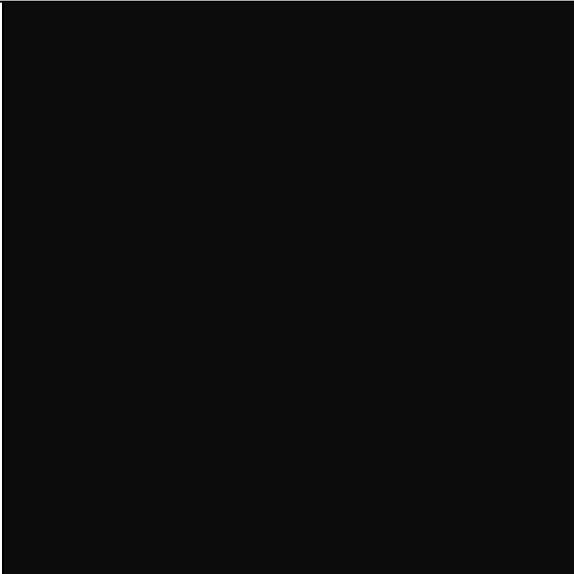
| Project summary  | Measurable Indicators  | Progress and Achievements  | Actions required/planned for next period |
|--|--|--|--|
| <p><b>Goal:</b> To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but constrained 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> |  | (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)  | (do not fill not applicable)             |
| <p><b>Purpose</b><br/>To facilitate a synergistic approach to biodiversity conservation within the Ruipa Corridor among key stakeholders; developing the capabilities of local and national stakeholders to sustainably and equitably manage respective parts of the corridor.</p>   | <p>Gather biological and socio-economic data to effectively inform the development of Management Plans for key stakeholders.</p> <p>Key stakeholders participate in the design and implementation of specific Management Plans: private land-owners, government, and local communities, effectively operational by 2010.</p> <p>Capacity building workshops held to raise environmental awareness and reduce costs of implementing management plans, and training of stakeholder representatives in biodiversity monitoring.</p> | <p>Completed. Data recorded and distributed in report form. Data collected regarding KVTC land and produced in internal report.</p> <p>Completed, land use management plans developed for four participating villages in a collaboration between stakeholders.</p> <p>Completed. Capacity building workshops held, BTECs taught, students taught, lectures held.</p>   |  |
| <p><b>Output 1.</b> Significantly improved knowledge of the Ruipa Corridor, in terms of biodiversity, large mammal migration and land-use, disseminated to stakeholders and scientific community.</p>  | <p>Comprehensive information on biodiversity; spatial and temporal migratory patterns; land-use; species inventories.</p> <p>Identification of anthropogenic threats throughout the corridor.</p> <p>Assessment of viability of corridor.</p>  | <p>The corridor area has been widely surveyed, providing data on large mammal land use in the corridor. Species inventories have been conducted as part of this research. The conclusions of this research have been published and disseminated.</p> <p>Threats to the corridor have been assessed as part of this survey.</p> <p>Research into these two areas has been combined to assess the viability of the corridor which has been published and disseminated.</p> |  |

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| Activity 1.1 Ground surveys to map large mammal movement through the corridor  |  | Completed  |
| Activity 1.2, Development of management plans for key stakeholders   |  | Completed  |
| Activity 1.3 Capacity building workshops aiming to mitigate human-wildlife conflict  |  | Completed  |
| <b>Output 2</b> Comprehensive Management Plans designed by Frontier-Tanzania for the Ruipa Wildlife Corridor with the participation and agreement of each of the key stakeholders, based on updated knowledge of Corridor biodiversity and threats, operational by April 2010) | <p>Workshops held in four villages with Village Environment Committees to enable development and implementation of management plans for village owned forests.</p> <p>Management plans developed by Frontier-Tanzania for private land-owners (e.g. Wild Footprints hunting company, Kilombero Valley Teak Company) and government owned land (Forestry and Beekeeping Division, Wildlife Division).</p> | <p>Multiple workshops have been held in the participating villages, bringing together district council staff and village people. These were a necessary and useful precursor to developing the land management plans.</p> <p>Management plans were developed for four participating villages through mapping and a series of council meetings and general assemblies.</p> <p>Management of KVTC land was greatly benefited by a complete conservation assessment. This survey studied large mammals, human impact and habitat variation. The results of this survey have been used to adapt the management strategies of the land.</p> |
| Activity 2.1. Training of stakeholder representatives in biodiversity monitoring   |  | Completed – 12 people obtained BTECs   |
| Activity 2.2. Annual surveys with stakeholders   |  | Completed – Regular contact with stakeholders  |
| Activity 2.3. Levels of anthropogenic activities monitored post-project by Frontier-Tanzania   |  | Completed – Large mammal transects have been conducted post-project until June 2012.   |
| <b>Output 3.</b> Environmental awareness raising and capacity building aiming to mitigate human-wildlife conflict through initiation of sustainable deterrent activities; and develop alternative income-generating activities to reduce dependence on forest resources.       | Workshop held for village representatives to expose villagers to deterrent techniques and income-generating activities.  | <p>Workshops held to discuss methods of deterring large mammals.</p> <p>Workshops arranged to introduce villagers to apiculture.</p>   |

|   |  |
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| Activity 3.1. Gathering of biological and socio-economic data to inform the development of management plans   | Completed – 275 households interviewed, 354 large mammal transects conducted.  |
| Activity 3.2. Consultations held in villages to enable the development of management plans for village owned forest   | Completed – Land use management plans developed.   |
| <b>Output 4.</b> Training of representatives of key stakeholders (Village Environmental Committee, government officials private land-owners) in monitoring techniques | Two Forest Officers, two Wildlife Division Game Rangers, two personnel from each of the private land-owning companies, 2 Village Environmental Committee members from each village, 2 UDSM students trained in monitoring techniques by Frontier-Tanzania through a formal BTEC qualification in Tropical Habitat Conservation |
|   | Completed – 12 BTECs awarded, stakeholders taught through developing Land use management plans, Multiple workshops held  |

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

| Project summary   | Measurable Indicators | Means of verification | Important Assumptions |
|---|-----------------------|-----------------------|-----------------------|
| <b>Goal:</b><br>Effective contribution in support of the implementation of the objectives of the Convention on Biological Diversity (CBD) and the Convention on the Conservation of Migratory Species (CMS), as well as related targets set by countries rich in biodiversity but constrained in resources. |                       |                       |                       |

|  |  |   |   |
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| <p><b>Sub-Goal:</b></p> <p>The Kilombero's Valley's Ruipa Corridor is preserved, maintaining connectivity for migratory species through the Valley, between the Udzungwa Mountains and Selous Game Reserve; conserving the unique habitats and biodiversity of this designated Ramsar site; reducing anthropogenic threats through equitable sharing of the costs and benefits of biodiversity conservation.</p> | <p>Ground surveys demonstrate sustained large mammal movement through the corridor and conservation of biodiversity after the implementation of stakeholder management plans.</p> <p>Decrease in unsustainable anthropogenic activities and human encroachment within the corridor.</p>  | <p>Data from seasonal monitoring of biodiversity, land-use changes, and socio-economic surveys during and post-project by Frontier-Tanzania.</p> <p>Levels of anthropogenic activities monitored post-project through disturbance surveys by Frontier-Tanzania.</p> |    |
| <p><b>Purpose</b></p> <p>To facilitate a synergistic approach to biodiversity conservation within the Ruipa Corridor among key stakeholders; developing the capabilities of local and national stakeholders to sustainably and equitably manage respective parts of the corridor.</p>  | <p>Gather biological and socio-economic data to effectively inform the development of Management Plans for key stakeholders.</p> <p>Key stakeholders participate in the design and implementation of specific Management Plans: private land-owners, government, and local communities, effectively operational by 2010.</p> <p>Capacity building workshops held to raise environmental awareness and reduce costs of implementing management plans, and training of stakeholder representatives in biodiversity monitoring.</p> | <p>Annual surveys with stakeholders before and after implementation of management plans to gauge costs and benefits of Management Plans and obtain feedback.</p>  | <p>Stakeholders remain supportive</p> <p>Relations between stakeholders are stable</p> <p>Key stakeholders incorporate recommendations made and implement management plans.</p> |

|   |  |   |  |
|---|--|---|--|
| <p><b>Outputs</b> (add or delete rows as necessary)</p> <p>1. Significantly improved knowledge of the Ruipa Corridor, in terms of biodiversity, large mammal migration and land-use, disseminated to stakeholders and scientific community.</p>                         | <p>Comprehensive information on biodiversity; spatial and temporal migratory patterns; land-use; species inventories.</p> <p>Identification of anthropogenic threats throughout the corridor.</p> <p>Assessment of viability of corridor.</p>  | <p>Publication of Frontier-Tanzania Environmental Research Series Technical Reports and 2 peer-review publications</p> <p>Data to be shared with stakeholders and submitted to relevant national and international databases.</p>   | <p>Stakeholders allow researchers on the land in the corridor to conduct surveys.</p>  |
| <p>2. Comprehensive Management Plans designed by Frontier-Tanzania for the Ruipa Wildlife Corridor with the participation and agreement of each of the key stakeholders, based on updated knowledge of Corridor biodiversity and threats, operational by April 2010</p> | <p>Workshops held in four villages with Village Environment Committees to enable development and implementation of management plans for village owned forests.</p> <p>Management plans developed by Frontier-Tanzania for private land-owners (e.g. Wild Footprints hunting company, Kilombero Valley Teak Company) and government owned land (Forestry and Beekeeping Division, Wildlife Division).</p> | <p>Management plans formulated and approved by all stakeholders.</p> <p>Management plans implemented and enforced by stakeholders on their land within the Ruipa Corridor.</p> <p>Publicity articles, posters, leaflets, website and meeting minutes.</p> <p>Monitoring and facilitation of Management Plan implementation by Frontier-Tanzania for a further year until EoP.</p> | <p>Continued presence and support of key land-owning stakeholders.</p> <p>Suitable permanent monitoring sites identified.</p>  |
| <p>3. Environmental awareness raising and capacity building aiming to mitigate human-wildlife conflict through initiation of sustainable deterrent activities; and develop alternative income-generating activities to reduce dependence on forest resources.</p>       | <p>Workshop held for village representatives to expose villagers to deterrent techniques and income-generating activities.</p>   | <p>Workshop reports and evaluation summary by Village Coordinator</p> <p>Annual socio-economic and human-resource use assessment surveys post project carried out by Frontier-Tanzania</p> <p>Publicity articles, posters, leaflets, website and meeting minutes.</p>   |  |
| <p>4. Training of representatives of key stakeholders (Village Environmental Committee, government officials private land-owners) in monitoring techniques</p>  | <p>Two Forest Officers, two Wildlife Division Game Rangers, two personnel from each of the private land-owning companies, 2 Village Environmental</p>  | <p>Trainees awarded BTEC qualifications accredited by Edexcel, to demonstrate ability to continue monitoring activities.</p>  | <p>Suitable candidates for training identified</p> <p>Trainees pass course requirements</p> <p>Funding for monitoring and sufficient number of people trained to continue post</p> |

|  |  |  |                |
|--|--|--|----------------|
|  | <p>Committee members from each village, 2 UDSM students trained in monitoring techniques by Frontier-Tanzania through a formal BTEC qualification in Tropical Habitat Conservation</p> |  | <p>project</p> |
| <p><b>Activities</b> (details in workplan)</p> <p>1.1 Ground surveys to map large mammal movement through the corridor</p> <p>1.2 Development of management plans for key stakeholders</p> <p>1.3 Capacity building workshops aiming to mitigate human-wildlife conflict</p> <p>2.1 Training of stakeholder representatives in biodiversity monitoring</p> <p>2.2 Annual surveys with stakeholders</p> <p>2.3 Levels of anthropogenic activities monitored post-project by Frontier-Tanzania</p> <p>3.1 Gathering of biological and socio-economic data to inform the development of management plans</p> <p>3.2 Consultations held in villages to enable the development of management plans for village owned forest</p> |  |  |                |
| <p><b>Monitoring activities:</b></p> <p>Indicator 1. Occurrence of large mammal movements within the Ruipa Corridor</p> <p>Indicator 2. Level of implementation of management recommendations</p> <p>Indicator 3. Number of candidates trained in BTEC Wildlife Monitoring</p> <p>Indicator 4. Prevalence of low-impact technologies implemented in local villages</p>   |  |  |                |



## 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    | 40%       | Develop national strategies that integrate conservation and sustainable use.  |
| 7. Identification and Monitoring                          | 30%       | 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                                 | 20%       | 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 and equitable way of results and benefits.   |

| <b>Article No./Title</b>                 | <b>Project %</b> | <b>Article Description</b>   |
|--|------------------|--|
| 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                       | 10%              | 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  |   |
| 1b                       | Number of PhD qualifications obtained  |   |
| 2                        | Number of Masters qualifications obtained  |   |
| 3                        | Number of other qualifications obtained  | 12 BTECs                                    |
| 4a                       | Number of undergraduate students receiving training  | 7   |
| 4b                       | Number of training weeks provided to undergraduate students  | 52  |
| 4c                       | Number of postgraduate students receiving training (not 1-3 above)   |   |
| 4d                       | Number of training weeks for postgraduate students   |   |
| 5                        | Number of people receiving other forms of long-term (>1yr) training not leading to formal qualification( ie not categories 1-4 above)                            |   |
| 6a                       | Number of people receiving other forms of short-term education/training (ie not categories 1-5 above)  |   |
| 6b                       | Number of training weeks not leading to formal qualification   |   |
| 7                        | Number of types of training materials produced for use by host country(s)  |   |
| <b>Research Measures</b> |  |   |
| 8                        | Number of weeks spent by UK project staff on project work in host country(s)   | 156   |
| 9                        | Number of species/habitat management plans (or action plans) produced for Governments, public authorities or other implementing agencies in the host country (s) | 4   |
| 10                       | Number of formal documents produced to assist work related to species identification, classification and recording.  |   |
| 11a                      | Number of papers published or accepted for publication in peer reviewed journals   |   |
| 11b                      | Number of papers published or accepted for publication elsewhere   | 1   |
| 12a                      | Number of computer-based databases established (containing species/generic information) and handed over to host country  |   |
| 12b                      | Number of computer-based databases enhanced (containing species/genetic information) and handed over to host country   |   |

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

| Code  | Description  | Totals (plus additional detail as required) |
|---|--|---|
| <b>Physical Measures</b>  |  |   |
| 20  | Estimated value (£s) of physical assets handed over to host country(s)                   |   |
| 21  | Number of permanent educational/training/research facilities or organisation established |   |
| 22  | Number of permanent field plots established  |   |
| 23  | Value of additional resources raised for project   |   |
| <b>Other Measures used by the project and not currently including in DI standard measures</b> |  |   |
|   |  |   |
|   |  |   |
|   |  |   |
|   |  |   |

## Annex 5 Publications

| Type *<br>(eg journals, manual, CDs) | Detail<br>(title, author, year)   | Publishers<br>(name, city)                | Available from<br>(eg contact address, website)   | Cost<br>£ |
|--------------------------------------|---|---|---|-----------|
| Report                               | A.Bamford et al,<br>The status of the Ruipa corridor between the Selous Game Reserve and the Udzungwa Mountains, 2010 | The Society for Environmental Exploration | <a href="http://www.frontier.ac.uk/Publications/Files/2011_07_19_17_12_37_520.pdf">http://www.frontier.ac.uk/Publications/Files/2011_07_19_17_12_37_520.pdf</a> | free      |

## Annex 6 Darwin Contacts

|                                       |   |
|---------------------------------------|---|
| Project Reference                     | 17028   |
| Project Title                         | Conserving the Ruipa Corridor: facilitating cohesive management between diverse stakeholders. |
|                                       |   |
| <b>UK Leader Details</b>              |   |
| Name                                  | Sam Lloyd   |
| Role within Darwin Project            | Project Leader  |
| Address                               | 50-52 Rivington Street EC2A 3QP   |
| Phone                                 | 02076132422   |
| Fax                                   |   |
| Email                                 |   |
| <b>Other UK Contact (if relevant)</b> |   |
| Name                                  | Charlotte Lyddon  |
| Role within Darwin Project            | Head of Operations  |
| Address                               | 50-52 Rivington Street EC2A 3QP   |
| Phone                                 | 02076132422   |
| Fax                                   |   |
| Email                                 |   |
| <b>Partner 1</b>                      |   |
| Name                                  | Flora Magige  |
| Organisation                          | The University of Dar Es Salaam   |
| Role within Darwin Project            | Technical advice  |
| Address                               | University of Dar es Salaam<br>PO. Box 35131<br>Dar es Salaam                                 |
| Fax                                   |   |
| Email                                 |   |
| <b>Partner 2 (if relevant)</b>        |   |
| Name                                  |   |
| Organisation                          |   |
| Role within Darwin Project            |   |
| Address                               |   |
| Fax                                   |   |
| Email                                 |   |