



18-014



DARWIN200

Submit by Monday 30 November 2009

DARWIN INITIATIVE APPLICATION FOR GRANT FOR ROUND 17: STAGE 2

Please read the Guidance Notes before completing this form. Where no word limits are given, the size of the box is a guide to the amount of information required. Information to be extracted to the database is highlighted blue.

1. Name and address of organisation (NB: Notification of results will be by post)

Name: Zoological Society of London (ZSL)	Address: Regent's Park, London NW1 4RY, UK
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2. Project title (not exceeding 10 words)

Ecosystem-wide forest conservation in DRC using okapi as a flagship (project ref. 1543)

3. Project dates, duration and total Darwin Initiative Grant requested

Proposed start date: April 2010		Duration of project: 36 months		End date: March 2013	
Darwin funding requested	2010/11 £	2011/12 £	2012/2013 £	2013/14 £ 0	Total £ 299,028

4. Define the purpose of the project (extracted from logframe)

Forest biodiversity across okapi range conserved with equitable benefits to local communities, through building capacity of park authorities to manage protected areas and the development of sustainable livelihoods which value forest ecosystem services alongside communities outside protected areas

5. Principals in project. Please provide a one page CV for each of these named individuals. You may copy and paste this table if you need to provide details of more than one overseas project partner.

Details	Project Leader	Other UK personnel (working more than 50% of their time on project)
Surname	Kümpel	Bolingo Fataki
Forename (s)	Noëlle	John
Post held	Programme Manager	Project Administrator
Institution (if different to above)	ZSL	ZSL
Department	Conservation Programmes - UK	Conservation Programmes – DRC
Telephone		
Email		

Details	Main (national) project partner and co-ordinator in host country/ies	Secondary (local) project partner and co-ordinator in host country/ies
Surname	Muamba	Mushenzi
Forename (s)	Georges Tshibusu	Norbert
Post held	Scientist, Assistant to Director General, Director of International Cooperation and Planning	Deputy Provincial Director
Institution (if different to above)	ICCN	ICCN
Department	Office of Director General, Kinshasa	North Kivu province
Telephone		
Email		

6. Has your organisation received funding under the Darwin Initiative before? If so, give details.
*Aside from project 162/09/020, this list does not include projects by ZSL's Institute of Zoology

Reference No	Project Leader	Title
162/09/020*	Guy Cowlshaw	Development of a research and training unit at Garamba (DRC)
162/12/004	Rajan Amin	Building capacity for conservation of a critically endangered flagship species (Kenya)
162/12/029	Kate Oddie / Nigel Barton	The Steppe Forward Programme: training conservationists for Mongolia's future
162/13/034	Sarah Christie	Wildlife health monitoring and capacity-building for leopard conservation in Russia
162/14/024	Belinda Stewart-Cox	Afro-Asian Elephant Community Conservation Network
162/14/060	Alison Shaw	Sustainable management of ornamental fish species in Mamiraua, Brazil
162/16/009	Richard Kock	Crisis to biological management: rhinoceros, grassland and public engagement - Nepal
162/16/010	Noëlle Kümpel / Chris Ransom	Wildlife Wood Project (Ghana and Cameroon)
162/17/029	Tom Maddox	Berbak to the future: harnessing carbon to conserve biodiversity

7. IF YOU ANSWERED 'NO' TO QUESTION 6 describe briefly the aims, activities and achievements of your organisation. (Large institutions please note that this should describe your unit or department)

Aims (50 words)
Activities (50 words)
Achievements (50 words)

8. Please list all the institutions involved including the UK/collaborative (where there are partners in addition to the applicant organisation) and host country partners that will be involved, and explain their roles and responsibilities in the project. Describe the extent of their involvement at all stages, including project development. This section should illustrate the capacity of host country partners to be involved in the project. Please provide written evidence of partnerships. Please copy/delete boxes for more or fewer partnerships.

Lead UK institution and website where available:	Details (including roles and responsibilities and capacity to engage with the project):
Zoological Society of London (ZSL) www.zsl.org/virunga	<p>ZSL, an international research, conservation and education charity established in 1826, with two zoos, an Institute of Zoology and a Conservation Programmes department, carries out field conservation and research in around 80 countries. ZSL started working in the five World Heritage Sites of DRC in 2001 and since this time has been supporting ICCN through capacity building, training, park infrastructure rehabilitation, patrol/ranger support and socio-economic/ecological research and monitoring, funded by the EU, UN, UK and US. ZSL recently completed a €1.5 million project to support the rehabilitation of Virunga National Park (NP) and is currently building capacity for wildlife monitoring and management in the north of the park, focussing on okapi, and working with communities around the park. Okapi are particularly special for ZSL. The species was first described at a meeting of the Society in 1901, and the type specimen originated from the Watalinga forest in Virunga NP where ZSL is now working over 100 years on and where a ZSL-ICCN team obtained the first camera trap pictures of okapi individuals in the wild in 2008. In addition, the okapi has long been a much-loved species at ZSL London Zoo and through the zoo ZSL has provided funding for GIC's project at Epulu in RFO (see below).</p> <p>ZSL will train ICCN rangers and community monitors across the okapi range in recce/transect/camera trapping monitoring methods, provide ICCN and other partners with technical assistance to carry out the initial set of baseline surveys in their respective sites and coordinate the okapi faecal sample collection outside the Okapi Faunal Reserve (<i>Reserve de la Faune de l'Okapi</i>: RFO) for genetic analysis by our partners at Cardiff University. ZSL will provide a small, well-trained and mobile field team to lead the camera trapping and linked recce/transect surveys in each site, and will work with ICCN to continue okapi/threat monitoring in and around Virunga NP and Mt Hoyo. Alongside this project, ZSL will also work with other partners to develop livelihood alternatives in the Virunga-Hoyo region to reduce pressure on okapi and other forest resources.</p> <p>Following the drawing up of a concept note for this project by ZSL, extensive discussions have been held to develop this proposal between ZSL and ICCN (National Direction, North Kivu Provincial Direction and RFO and Mt Hoyo Conservators), Linda Penfold and Steve Shurter of GIC/White Oak Conservation Center, Richard Tshombe of WCS, Jo Thompson of the Lukuru Foundation (planning to survey the Lukenie-Sankuru-Lusambo forest block), John and Terese Hart (working in the TL2 landscape under the Lukuru Foundation), Cleve Hicks of the University of Amsterdam and Wasmoeth Foundation (working in the Bili-Akiti region), Bryna Griffin of the Dian Fossey Gorilla Fund International (DFGFI) and Stuart Nixon of Fauna and Flora International (FFI) (both working in and around Maiko NP). All these partners involved in conservation of and research on okapi across its range have been extremely positive regarding this project and all are agreed on the urgent need for it. ZSL has established an email group linking up the technical partners. Survey methods and a detailed fieldwork schedule will be discussed in an ad hoc meeting of several members of this group in early 2010 and developed fully at the initial meeting of the technical steering group (which will be made up of representatives from each partner in the project and facilitated by ZSL) in the first month of this Darwin project. Details of partners' roles and responsibilities will be set out in a joint Memorandum of Understanding at the start of the project once funding is assured.</p>

<p>Lead host country Partner and website where available:</p> <p><i>Institut Congolais pour la Conservation de la Nature (ICCN)</i> www.gorillacd.org</p>	<p>Details (including roles and responsibilities and capacity to engage with the project):</p> <p>ICCN, formed upon the creation of Virunga National Park (NP) in 1925, is the government agency charged with the conservation of nature in DRC's protected area network. ICCN has been ZSL's key partner in all activities in DRC since 2001. Between 2004 and 2008, ZSL focused on supporting ICCN's activities in and around Virunga NP, building the capacity of ICCN to manage the park by rehabilitating infrastructure, supporting rangers and patrols and training personnel under a €1.5 million grant from the European Union (EU). The past year ZSL has continued to train and support ICCN to monitor okapi and other wildlife in and around the Watalinga forest of northern Virunga NP. ICCN General Direction, based in Kinshasa, is fully behind this project and will provide rangers from Virunga NP, Mt Hoyo Reserve, RFO, Maiko NP and hopefully also Rubi-Tele Reserve for advanced training in biomonitoring via stand-alone and patrol-based methods, via both a central training course at Epulu at the start of the project and field-based surveys at their own site. Where security and funds external to this project allow, ICCN rangers will carry out continued patrols/biomonitoring in these protected areas. The North Kivu Provincial Direction of ICCN (which oversees Virunga NP) and the Conservator of Mt Hoyo Reserve recognise the need for the park authorities to engage with communities for protected area conservation efforts to be sustainable and will work with ZSL to improve community engagement in the Virunga-Hoyo region.</p>
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<p>Partner Name and website where available:</p> <p>Gilman International Conservation (GIC) / White Oak Conservation Center www.giconline.org</p>	<p>Details (including roles and responsibilities and capacity to engage with the project):</p> <p>Gilman International Conservation (GIC) and White Oak Conservation Center promote conservation of flagship species and their natural habitats through integrated partnerships, capacity building, and practical approaches to wildlife management. The Okapi Conservation Project was initiated by GIC in 1987 with the objective of eliciting support for the conservation of the wild okapi from zoological institutions managing okapi in zoos around the world. Okapi ambassadors in zoos help instil awareness of the rapid destruction of rainforests and generate financial support for the preservation of okapi habitat in the Ituri forest in DRC. The project has significantly contributed to the establishment and security of the RFO in Ituri forest. GIC is based at the Okapi Breeding and Research Station, ICCN's headquarters at Epulu in RFO, and helps provide the infrastructure for the station and food, housing, clothing, clinical facilities and schools for the employees and families of GIC and ICCN. GIC will provide technical input regarding okapi ecology, support ICCN in okapi monitoring in RFO and collect okapi blood and faecal samples from both captive populations held at Epulu research station and wild populations in the reserve for the development of genetic markers and testing of faecal genetic analysis. Dr Linda Penfold, Research Coordinator at White Oak, has already submitted separate proposals and supplied okapi blood samples to support the genetic work started by Cardiff University, and is also planning to test whether near infra-red spectroscopy (NIRS) of okapi faecal matter can be used to identify individual okapi alongside conventional faecal DNA analysis; this research will be separately funded but results will feed into this Darwin project.</p>
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<p>Partner Name and website where available:</p> <p>Wildlife Conservation Society (WCS) www.wcs.org</p>	<p>Details (including roles and responsibilities and capacity to engage with the project):</p> <p>The Wildlife Conservation Society (WCS) has been supporting conservation projects in DRC since 1959. WCS has undertaken wildlife surveys and support to ICCN in protected areas throughout DRC, including RFO, Itombwe Massif and Kahuzi Biega, Maiko, Salonga and Virunga National Parks. WCS's national office is in Kinshasa with local offices in Beni and Goma, the latter being shared with ZSL. ZSL and WCS have an institution-wide Memorandum of Understanding and in DRC have submitted a number of joint proposals for a REDD project in the Virunga-Hoyo region. For this project, WCS will host the survey methods training course at their CEFRECOF training centre at Epulu.</p>
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<p>Partner Name and website where available:</p> <p>Lukuru Foundation (Lukuru Project / TL2 Project) www.bonoboincongo.com</p>	<p>Details (including roles and responsibilities and capacity to engage with the project):</p> <p>The Lukuru Foundation is the platform for the Lukuru Project and the TL2 Project. Dr Jo Thompson, Director of both the Lukuru Foundation and the Lukuru Project, has submitted proposals to support planned surveys in the Lukenie-Sankuru-Lusambo forest block; okapi have already been confirmed north of the Lukenie river and these surveys would determine whether they are also to the south – this is the south-westerly extent of their range. Drs John and Terese Hart of the TL2 Project have been working in DRC since 1974 and in the unprotected TL2 landscape (which includes the Tshuapa, Lomami and Lualaba catchments, to the west of Lukenie) since 2007, where they have confirmed the presence of okapi alongside other flagship species such as bonobo and Congo peacock, all seriously threatened by bushmeat. Both these projects will contribute okapi faecal samples collected from this area during the course of their surveys and participate in the technical steering group.</p>
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<p>Partner Name and website where available:</p> <p>Cardiff University www.cardiff.ac.uk</p>	<p>Details (including roles and responsibilities and capacity to engage with the project):</p> <p>The genetic analysis of okapi faecal and tissue samples will be carried out at Cardiff University in Professor Mike Bruford's lab in the School of Biosciences. Prof. Bruford has been primary supervisor for 17 PhD students to date and has co-supervised 11 others. All theses were submitted within 4 years and were successful, yielding 51 publications to date. Prof. Bruford's research during the last 15 years has focused on the application of molecular genetics to the conservation of rare species and fragmented populations (e.g. O'Ryan et al 1998; Keller et al 2001; Goossens et al 2006; Zhang et al 2007) and is explicitly policy and application oriented (e.g. Vernesi et al 2008).</p> <p>The bulk of the genetic analysis will be carried out by proposed PhD student Dave Stanton under a separately funded PhD studentship supervised by Prof. Bruford. Microsatellite markers and mitochondrial DNA will be used to describe okapi population processes and structure within DRC. The molecular biology lab at Cardiff has already isolated microsatellites for okapi, using blood samples provided by project partners GIC/White Oak Conservation Centre. Cleve Hicks from the University of Amsterdam has supplied okapi faecal samples collected during surveys in the Buta-Akiti region to Prof. Bruford's lab for analysis and these will be used to start testing the primers on samples collected in the field.</p> <p>Two proposals have been submitted by GIC to support this work over the next year, and a joint PhD studentship application with ZSL as the CASE partner has been submitted to the UK's Natural Environment Research Council (NERC) to start October 2010. This would provide three years of funding and would mean that the project would be co-supervised by Drs Jinliang Wang and John Ewen of ZSL Institute of Zoology's Genetic Variation, Fitness and Adaptability research theme, with input from Dr Noëlle Kümpel of ZSL's Africa Conservation Programme (project leader for this proposal).</p>
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<p>Partner Name and website where available:</p> <p>Imperial College London / ZSL Institute of Zoology http://www3.imperial.ac.uk/lifesciences/postgraduate/courselist/conservationscience www.zsl.org/science/research/</p>	<p>Details (including roles and responsibilities and capacity to engage with the project):</p> <p>Two students on the Imperial College London MSc in Conservation Science course (joint with ZSL's Institute of Zoology, the Royal Botanic Gardens Kew and the Durrell Wildlife Conservation Trust) will carry out research projects alongside the project in year 2. Students are familiarised during the course with ZSL's conservation work and past students have successfully carried out projects in conjunction with the Gabon and Cameroon projects of ZSL's Africa programme. The students will carry out their fieldwork in DRC alongside the Congolese MSc students to facilitate exchange of skills and information. The students will be supervised by project leader Dr Noëlle Kümpel and MSc course director Dr Marcus Rowcliffe, a research fellow at ZSL's Institute of Zoology who has extensive experience in applied research on bushmeat and biomonitoring methods, in particular camera trapping. Dr Rowcliffe will also lend his expertise to the overall Darwin project technical steering group.</p> <p>See the Cardiff section above for details of co-supervision of the genetics PhD by ZSL staff should the application for the NERC CASE studentship be successful.</p>
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<p>Partner Name and website where available:</p> <p>Communities of Watalinga/Mbau collectivities and Mt Hoyo areas</p>	<p>Details (including roles and responsibilities and capacity to engage with the project):</p> <p>We will work closely with communities across the Virunga-Hoyo landscape, using participatory approaches for forest conservation and alternative livelihood development. The ZSL team has already been working with communities in the Watalinga and Mbau 'collectivities' on either side of the Watalinga forest of Virunga NP. The local people living here rely heavily on the forests for their livelihoods and ICCN recognises the need for greater integration of communities in protected area conservation, particularly in this northern area of Virunga, where charcoal production and trade and agricultural expansion is increasing dramatically as stability and internally displaced people return to the area and with its improved accessibility following the rehabilitation of the Mbau-Kamango road cutting through the Watalinga forest. Initial participatory discussions were held with communities in these collectivities during a three-month survey carried out by ZSL and ICCN between July and September 2008, looking at the impacts of this new road on okapi and forest conservation in the Watalinga forest, which laid the foundation for this project. Since then, ZSL has provided training in community conservation for ICCN staff and together we have held meetings with the 'chefs de canton' (village chiefs) of Watalinga and Mbau, who are very receptive to this project and have provided both information and support and convened community workshops. ZSL will work together with the communities to identify alternative livelihoods such as sustainable agroforestry and potentially carbon income through the development of a REDD project (which will be funded by other sources – see section 9a below - but contribute to this project).</p>
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<p>9a. Have you consulted stakeholders not already mentioned above? If yes, please give details:</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>
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Cleve Hicks (currently a PhD student at the University of Amsterdam and working in conjunction with the Wasmoeth Wildlife Foundation) has been carrying out surveys in the Bili-Akiti region (the northerly extent of the okapi's range) and has confirmed the presence of okapi in the Buta-Akiti area. He has already sent okapi faecal samples from this region to Cardiff University and will continue to be involved in this project when he moves to Leipzig next year.

Frankfurt Zoological Society (FZS) is the official implementing partner of ICCN supporting the rehabilitation of Maiko NP and has been contacted regarding collaboration in Maiko NP and included in the okapi email group. It is hoped that FZS will support ICCN-led surveys in Maiko NP once the park has been demilitarised. Fauna and Flora International (FFI) and the Dian Fossey Gorilla Fund International (DFGFI) are both working on the ground in and around Maiko NP and are also in support of this proposal with key staff such as Stuart Nixon (who has carried out okapi surveys in Maiko NP, Usala forest and Virunga NP under ZSL) also included and involved in the okapi email group. FFI is involved in community conservation around protected areas across DRC and is currently establishing a community-based conservation strategy with ICCN around Maiko NP. FFI has also carried out a training workshop on this topic for ICCN staff in Virunga NP under ZSL's current project there and we hope to continue to collaborate regarding working with communities under this Darwin-funded project.

Uganda Wildlife Authority (UWA) will be involved in transboundary issues, in particular in dealing with the issue of the illegal trade in okapi and other wildlife and forest products across the border from DRC to Uganda. We hope that UWA will carry out similar patrols/monitoring of okapi in Semliki NP in Uganda, where okapi used to be found and from where they have again been recently reported. Initial discussions have been made during the bi-annual transboundary meetings held between ICCN, UWA and the Rwandan wildlife authority which are attended by ZSL staff, and the Greater Virunga Transboundary Collaboration Executive Secretariat will be consulted regarding the development of a transboundary strategy on okapi.

We will discuss a partnership with a number of Congolese universities, including those in Kisangani, Butembo and Goma, with the aim of establishing an MOU to enable Congolese MSc students to carry out their thesis research as part of this project.

ESCO-Kivu is a local agroforestry company based in North Kivu helping community farmers to grow environmentally-friendly produce such as shade cocoa. They are aiming for Rainforest Alliance and Organic certification and have a Fair Trade policy. We have submitted joint proposals to the Congo Basin Forest Fund and the EC's ENRTP fund (with ZSL as lead partner) regarding other proposed work in the landscape and collaboration will be discussed regarding the community economic alternatives element of this project. Alongside ESCO-Kivu we have also submitted proposals for a REDD project in the Virunga-Hoyo forest corridor in conjunction with WCS and the Conservation Company. We have also submitted a proposal to DfID's Civil Society Challenge Fund for awareness-raising of land and resource rights in this landscape with local NGO *Aide et Action pour la Paix* (AAP) and will consult them in the context of this project.

We are in contact with Réseau CREF (*Réseau pour la Conservation et la Réhabilitation des Ecosystèmes Forestiers*), DRC's forest conservation network, which has an office in Goma, North Kivu (a representative also attended the ZSL-led workshop in Goma in October 2008). While the network does not have any active projects in the proposed study area, they are working with communities around the ENRA timber concession to the west of the Virunga-Hoyo corridor and to the south of the Ruwenzori region and we hope to strengthen links with the network.

9b. Do you intend to consult other stakeholders?

Yes No

If yes, please give details:

The IUCN Antelope Specialist Group, which carried out the last assessment of okapi for the IUCN Red List, will be contacted for advice regarding this project and relevant representatives will be invited to the workshop to develop the okapi conservation action plan.

9c. Have you had any (other) contact with the government not already stated? Yes No

If yes, please give details:

Senior-level representatives of the provincial-level Ministry of Agriculture and Ministry of Environment, Conservation and Tourism attended the ZSL-led workshop held in Goma in October 2008 to discuss okapi conservation in and around Virunga NP, and were involved in the break-out group discussions. They agreed the recommendations of the workshop, which implicate both Ministries as actors in carrying them out, and were positive about their involvement in continued conservation and community work in the region. While ICCN is our main government partner on this project, we will continue to liaise with these ministries at provincial and national level as appropriate.

9d. Is any liaison proposed with the CBD/CMS/CITES focal point in the host country? Yes No

If yes, please give details:

We have the contact details of the CBD focal point within the Ministry of Environment, Conservation and Tourism in Kinshasa, and will contact him once the project has started to inform him of our planned activities, ask his advice and discuss progress.

9e. Will your project support any work in the UK Overseas Territories? Yes No

If yes, please give brief details stating which Territory/ies will be involved.

No

PROJECT DETAILS

10. Please provide a Concept note (Max 1,000 words) (repeat from Stage 1, with changes highlighted)

DRC's unique but threatened forest biodiversity

The okapi is an elusive rainforest giraffid now endemic to the tropical forests of central/north-eastern Democratic Republic of Congo (DRC). An iconic species for DRC, featuring on the ICCN logo and cover of the 2009 CBD national report and highly esteemed by the indigenous Mbuti, it remains poorly known. Okapi are found in four protected areas, Okapi Faunal Reserve (RFO), Maiko NP, Virunga NP and Rubi-Tele Reserve. They have also recently been reported from two non-protected areas (Buta-Akiti/TL2), which alongside Virunga NP lie outside their current official range¹.

The eastern limit of the okapi's range, the Virunga-Hoyo landscape is widely recognised as one of the most biodiverse regions on the African continent. This forest landscape spans from the northern sector of Virunga NP – Africa's oldest park and first UNESCO natural World Heritage Site - north to Mt Hoyo Reserve. Representing a unique zone of phytological convergence, the landscape supports an important reservoir of rare and flagship species, including okapi, elephant, hippopotamus, chimpanzee, the endemic Rwenzori leopard and Rwenzori turaco.

Unfortunately, DRC is emerging from over a decade of civil conflict, during which period capacity to manage and protect the forests okapi inhabit has been substantially reduced². Increasing human population densities and poverty, compounded by resettlement of displaced peoples and movement of rebels, is exerting immense pressure on forest resources through deforestation (through slash-and-burn shifting cultivation), forest degradation (for charcoal, timber, fuelwood and mining) and hunting. Although okapi are protected under Congolese law, they are increasingly threatened by hunting for bushmeat/skins and habitat destruction. While their assessment as Near Threatened on the IUCN Red List hinges on the fact that the significant population in the RFO in

¹ IUCN SSC Antelope Specialist Group 2008. *Okapia johnstoni*. In: IUCN 2009. IUCN Red List of Threatened Species. Version 2009.1. <www.iucnredlist.org>. Downloaded on 14 August 2009.

² République Démocratique du Congo (2002) Plan National Stratégique D'Action en matière de la Diversité Biologique: période de 2002 à 2010
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the Ituri forest remains stable, recent post-conflict wildlife surveys conducted there documented a 44% decline in okapi between 1996 and 2006³.

Recent ZSL/ICCN surveys demonstrated that while okapi still persist in Virunga NP, the population is likely to be small and fragmented⁴. There have already been local extinctions of forest elephant and severe reductions in the once-numerous hippopotamus within the landscape, due to hunting for ivory and bushmeat, largely for cross-border trade to Uganda. Forest elephant are now in danger of extinction in eastern DRC, with the last known sizeable populations in Ituri but possible populations still remaining in the Rwenzori mountains and Mt Hoyo.

DRC's biodiversity obligations

The CBD urges Parties, in Decision IX/5 on forest biodiversity, to address human-induced threats to forest biodiversity, including unregulated and unsustainable use of forest products and resources (including bushmeat) (b), forest biodiversity monitoring and inventorying (g), ecological connectivity (h), an ecosystem approach (j), improved law enforcement (l), and inclusion of local communities in forest management (m). An ecosystem approach should develop incentives for biodiversity conservation alongside sustainable use (Decision V/6), with species monitoring linked to a management plan identifying appropriate actions (Decision VII/11). At species-level, evaluation of the status of **gorilla and forest elephant**, levels of poaching and the impacts of the illegal cross-border trade is a priority, due to **their** listing under CMS Appendix I/II, as is controlling trade in **CITES Appendix I taxa** gorilla, chimpanzee, elephant and leopard.

DRC's 2009 CBD national report lists Virunga as a highest priority region and flags up the lack of capacity for law enforcement and addressing the drivers of forest loss (section 1.2.3), citing the need for conservation of endemic okapi (1.2.2) and hippopotamus in Virunga NP (1.3.2.2), and control of bushmeat hunting (1.3.2.3). DRC's 2002-2010 National Biodiversity Action Plan emphasises the need to build capacity for biodiversity management and enforcement (article 14.1), with improving knowledge of ecosystems/taxa and exploration of biodiversity in poorly-studied areas (theme 1), evaluation and mitigation of threatened ecosystems or species, involvement of communities in wildlife management, an ecosystem approach (theme 3), empowering of individuals (theme 15), inclusion of local people and NGOs in participatory management of biodiversity (theme 16) and incentive measures (theme 19) as strategic guidelines.

A nested ecosystem approach

There is clearly an urgent need to tackle the drivers of forest and biodiversity loss in DRC, by increasing the capacity of ICCN to protect, monitor and manage protected areas and incentivising communities to conserve forest resources outside these protected areas. This will promote genetic exchange between populations of flagship species, which is critical for the long-term survival of wide-ranging or low-density species. The project takes an ecosystem approach at two spatial scales: across the okapi's range and within the Virunga-Hoyo landscape. Firstly, using okapi as a flagship to engender support for broader forest conservation across their range, the project will carry out baseline surveys of okapi, elephant, hippopotamus, gorilla, chimpanzee and leopard as well as threats to them and other forest resources in **Virunga-Hoyo and at least four other sites**, carry out a range-wide genetic analysis of okapi to understand population structure and connectivity, train ICCN rangers and local communities in standardised monitoring of these species/threats and hold a multi-stakeholder workshop to develop an okapi conservation action plan **and to inform future Red List assessments**. Secondly, **within** the Virunga-Hoyo landscape, the project will **develop a model for okapi conservation by working** with local communities and private and public partners using participatory methods to develop sustainable livelihoods which value **forest** ecosystem services, such as REDD (reduced emissions from deforestation and forest degradation) or agroforestry initiatives.

³ Hart, J., R. Beyers, F. Grossman, M. Carbo, S. Dino, and F. Kahindo (2008) La Réserve de Faune Okapi: la distribution et fréquence de la grande faune et des activités humaine avec une évaluation de l'impact de 10 ans de conflit: 1996-2006. IMU technical report No.9. Wildlife Conservation Society, New York.

⁴ Nixon, S. and T. Lusenge (2008) Conservation status of okapi in Virunga National Park, DRC. ZSL, London Available at www.zsl.org/virunga (ZSL Conservation Report 9)

Main partners

ZSL has been working in DRC since 2001 with ICCN, carrying out capacity building, training, park infrastructure rehabilitation, patrol/ranger support, and socio-economic/ecological research and monitoring, funded by the EU, UN, UK (including a previous DI grant) and US. ZSL is currently building capacity for wildlife monitoring and management in northern Virunga NP, focussing on okapi, and working with communities around Virunga NP. ZSL will **facilitate a technical steering group to standardise survey methods**, train ICCN rangers in recce/transect/camera trapping monitoring methods, **conduct baseline surveys with ICCN and other partners** and **with GIC** coordinate okapi faecal sample collection for genetic analysis at Cardiff University. Livelihood alternatives will be developed in collaboration with ESCO-Kivu, WCS and AAP.

11a. Is this a new initiative or a development of existing work (funded through any source)?**Please give details:**

See sections 8 and 9a above for some of the existing work relevant to this project that has been or is being conducted by the project partners across the okapi range in DRC. This includes previous field surveys confirming the presence of okapi in Virunga NP⁵, RFO⁶, Maiko NP^{7,8,9}, the Usala forest north of Walikale¹⁰, the Buta-Akiti forest of north-central DRC¹¹ and the west bank of the Lualaba river (a major tributary of the Congo)¹². A paper is currently in preparation, for submission to the journal *Oryx*, detailing what we know to date regarding okapi distribution, abundance and threats based on these surveys, and calling for urgent follow-up to ensure conservation of the species in the long term.

In many cases these field surveys have not been focused on okapi but other flagship species such as gorillas or large mammals in general. Where possible surveys have been conducted using reasonably standardised methods, but there is a need for improved consistency and testing of methods against each other, including new techniques such as camera trapping and genetic censusing, to gauge which methods are most effective at monitoring key species and overall wildlife indicators. Monitoring methods and indicators developed in Cameroon during another of ZSL's current Darwin projects, the Wildlife Wood Project (project 162/16/010), will be tested during this project.

Many partners are planning new surveys in their respective areas to which this project will contribute in the form of standardising methods and where possible providing a field team to carry out accompanying camera trap surveys. Planned surveys include the Lukenie-Sankuru-Lusambo area by the Lukuru Foundation (provisionally May-August 2010) and RFO within the next two years in order to update previous surveys conducted there in 1995 and 2006¹³. All partners are agreed on the need for basic recce surveys for okapi between Buta-Akiti and RFO and RFO and Maiko NP/Virunga NP to determine whether okapi persist in these unprotected forest areas and their feasibility as genetic corridors.

⁵ Nixon, S. and T. Lusenge (2008) Conservation status of okapi in Virunga National Park, DRC. ZSL, London Available at www.zsl.org/virunga (ZSL Conservation Report 9)

⁶ Hart, J., R. Beyers, F. Grossman, M. Carbo, S. Dino, and F. Kahindo (2008) La Réserve de Faune Okapi: la distribution et fréquence de la grande faune et des activités humaine avec une évaluation de l'impact de 10 ans de conflit: 1996-2006. IMU technical report No.9. Wildlife Conservation Society, New York.

⁷ Amsini, F., Grossmann, F., Hart, J., Kibambe, C., Nyembo, B. and Vyahavwa, C. (2005) Identifying conservation priorities for the recovery of the Maiko National Park: post-conflict surveys of wildlife populations and human impact in the North Sector of the park. IMU Technical Report No. 4. Wildlife Conservation Society

⁸ Amsini, F., Grossmann, F., Hart, J., Kibambe, C., Nyembo, B. and Vyahavwa, C. (2006) Identifying conservation priorities for the recovery of the Maiko National Park: post-conflict surveys of wildlife populations and human impact in the South Sector (Oso Block) of the park. IMU Technical Report No. 6. Wildlife Conservation Society

⁹ Nixon S.C., Emmanuel E.E., Mufabule K., Nixon F.L., Bolamba D. and Mehlman P.T. (2006) The post-conflict status of Grauer's eastern gorilla (*Gorilla beringei graueri*) and other wildlife in the Maiko National Park Southern Sector and adjacent forests, Eastern Democratic Republic of Congo. Unpublished report submitted to ICCN and DFGFI

¹⁰ Nixon S.C., Mufabule K., Bahati A.E. and Patule I.M. (2007) A prospection survey of the Usala Forest and proposed Usala Community Reserve, Democratic Republic of Congo, March-April 2007. Unpublished report submitted to DFGFI.

¹¹ C. Hicks, pers. comm. 2008

¹² J. Hart, pers. comm. 2008

¹³ R. Beyers, pers. comm. 2009

Many of the partners working on this project were involved in an eastern chimpanzee workshop in Kampala in August this year and it is hoped that surveys for both eastern chimpanzee and okapi (whose ranges in DRC almost entirely overlap), as well as other target species, can be conducted at the same time, with funds raised for these different species thus pooled. In particular we will look at the relative targeting and vulnerability of different species within the okapi's range; where they are sympatric, it appears that forest elephant are the first to disappear from an area, then okapi and then chimpanzee, but further study is needed to confirm this and understand why.

Project partners at Cardiff University have already identified microsatellites from okapi blood supplied by GIC and are now testing the potential for faecal sample DNA analysis using samples provided by Cleve Hicks from the Buta-Akiti region. Partners at the White Oak Conservation Centre are planning to test whether near infra-red spectroscopy (NIRS) of okapi faecal matter can be used to identify individual okapi alongside this conventional faecal DNA analysis.

At the Virunga-Hoyo landscape level, the need for this project was identified during a 2008 survey carried out by ZSL in conjunction with ICCN in the Watalinga forest. The survey carried out a rapid assessment of the impacts of the newly rehabilitated Mbau-Kamango road (finished in 2006), which cuts through the Watalinga forest, with a particular focus on the impacts on the recently 'rediscovered' (also in 2006) population of okapi inhabiting the area as well as changes in resource use by local people and immigrants to the area. Following the survey, ZSL and ICCN held multi-stakeholder workshops in Beni (September 2008) and Goma (October 2008), attended by representatives from the Congolese and French governments, the UN, other protected areas where okapi are found, such as RFO and Maiko NP, and a large number of local and international NGOs, from which a number of key recommendations were made. These included improved biomonitoring of okapi and other wildlife (by mixed monitoring teams of ICCN and local community members outside the park), raising environmental awareness, evaluating dependence of local populations on natural resources, the development of alternatives and surveys of forest, households and land use in the area.

ZSL is currently working with ICCN to build capacity for wildlife monitoring and management in the northern sector of Virunga NP, and carrying out initial workshops with communities in the area to discuss okapi conservation and alternative livelihoods. Funding from the Darwin Initiative will enable us to build on this work and extend these activities north through to the Mt Hoyo area. This project also builds on the broader activities carried out by ZSL under this EU grant since 2004, namely rehabilitating park infrastructure and rebuilding the capacity of ICCN to manage the park. Finally, ZSL is currently coordinating and leading several joint proposals by ZSL, WCS, WWF, ESCO-Kivu and ICCN for a project focused on working with communities to reduce deforestation and alleviate poverty in the Virunga-Hoyo region, which will provide both matched funding and enable an increase in the extent of the activities proposed here, as well as provide continuity in terms of funding.

11b. Are you aware of any other individuals/organisations/Darwin Initiative projects carrying out similar work? Yes No
If yes, please give details explaining similarities and differences, and explaining how your work will be additional to this work and what attempts have been/will be made to co-operate with and learn lessons from such work for mutual benefits:

All partners working in ICCN-managed protected areas work within the framework of the 'CoCoCongo' (*Comité de Coordination du Congo*). At site level, ZSL is one of 9 conservation partners supporting ICCN in the management of Virunga NP. All partners meet twice a year to coordinate activities and plan activities at the 'CoCoSi' (*Comité de Coordination du Site*) meeting. ZSL is an active member of CoCoSi and is the only partner currently actively supporting ICCN in the Watalinga forest of Virunga NP. WCS has recently received some funds to start the rehabilitation of the Mt Hoyo Reserve, but the reserve remains desperately under-resourced and in need of conservation efforts.

WCS has helped ICCN to establish a biomonitoring system called MIST (Management Information System) which is now being used to gather data during ICCN patrols in Virunga NP. However

there remains a need for species-specific indicators and field training to feed into this system and ensure quality data collection. In addition, there is scope for a similar patrol-based monitoring system developed by ZSL colleagues for another Darwin-funded project in Kenya (project 162/12/004) to be harmonised with MIST to encourage the development of a standardised system across east-central Africa.

12. Please indicate which of the following biodiversity conventions your project will contribute to: -

At least one must be selected.

- Only indicate the conventions that your project is directly contributing to.

- No additional significance will be ascribed for projects that report contributions to more than one convention

Convention on Biological Diversity (CBD) Yes No

CITES Yes No

Convention on Migratory Species (CMS) Yes No

What problem is this project addressing and how was it identified? (150 words)

A decade of conflict has paid its toll on DRC's forests and their biodiversity. Okapi, a forest-specialist flagship species, is not faring well throughout its range. The halving of the large, relatively well-protected RFO population (recognised as a stronghold by IUCN in its 2008 Red List assessment) in the past decade demonstrates the impacts of this conflict and ensuing poverty-related threats. Given the uncertain social framework, high levels of hunting and rapid rates of deforestation for charcoal/agricultural expansion in DRC, the project partners feel that the okapi's Near Threatened assessment is insufficiently conservative and as such it is of conservation concern. Recent surveys indicate that other large flagship species inhabiting the okapi's forests are similarly threatened, such as eastern chimpanzee, eastern lowland gorilla and forest elephant, and there is an urgent need to pool efforts to conserve DRC's forest biodiversity at an ecosystem-level.

What will change as a result of this project? (150 words)

Firstly, this project will improve knowledge of okapi, as well as other flagship species and overall forest biodiversity, across its range, both within and outside protected areas, resulting in an action plan to guide efforts to conserve unique and/or threatened okapi subpopulations. Secondly, this and biomonitoring training will strengthen institutional capacity to monitor and manage wildlife in general. Thirdly, boosting the local capacity and resources of ICCN will improve protection of the Watalinga forest of Virunga NP and Mt Hoyo Reserve, which also potentially still harbours elephant. Fourthly, by engaging communities and raising awareness of the need for biodiversity conservation alongside assisting them in identifying sustainable alternative livelihoods, pressures on both these protected and unprotected forest areas will decrease. Finally, by increasing cross-border coordination and institutional incentives, patrol posts at the park borders and on the border with Uganda will monitor and regulate the cross-border trade in wildlife.

Why is the project important for the conservation of biodiversity? (150 words)

Although elusive, okapi is a popular flagship species in DRC and for ICCN and can therefore act as an umbrella for ground-level forest conservation efforts across its range, as well as to increase support for and awareness of the need to conserve DRC's forests. At local level, biodiversity in the Virunga-Hoyo landscape is severely threatened. Deforestation for conversion to agriculture, forest degradation for charcoal production and hunting for bushmeat consumption and the wildlife trade are all increasing, and while okapi still persist, ZSL-ICCN surveys have found other key large mammals either rare (e.g. bongo, buffalo) or absent (elephant). This project aims to reduce the rate of hunting and loss/fragmentation of the remaining forest, and provide corridors so wide-ranging, low density species such as elephant, chimpanzee and leopard can persist, by helping local communities develop sustainable alternative livelihoods, and will thus serve as a case study for broader forest conservation.

How does this relate to one or more of the biodiversity conventions? (150 words)

This project relates most strongly to the CBD, but also to CITES and the CMS. DRC is a signatory to all three conventions. The CBD urges Parties, in the first paragraph of Decision IX/5 on forest biodiversity (UNEP/CBD/COP/9/29), to 'address as a matter of priority human-induced threats to forest biodiversity, including unregulated and unsustainable use of forest products and resources (including unsustainable hunting and trade of bushmeat)' (see also concept note). This project takes the ecosystem approach advocated by the CBD to conserve okapi and forest biodiversity in the context of sustainable use. As gorilla, chimpanzee, elephant and leopard are all listed on CITES Appendix I, commercial cross-border trade (i.e. to Uganda) without import and export permits contravenes international law. Gorilla and elephant are also CMS Appendix I and II taxa respectively, and DRC is legally bound by the Gorilla Action Plan to conserve gorillas at landscape level.

13. How will the results of the project be disseminated; how will the project be advertised as a Darwin project and in what ways will the Darwin name and logo be used? (max 200 words)

A quarterly email update will be sent to all partners. Results of the surveys and research will be disseminated in reports to ICCN, peer-reviewed papers and conferences and the final okapi conservation action plan will be published as a ZSL report, with funding attributed to the Darwin Initiative and its logo visible. The Darwin logo will be prominently displayed on project vehicles and large field equipment, Powerpoint presentations and t-shirts if available. Darwin pens will also be used by project staff members and given out to community members as gifts.

ZSL has a very active press office and this will ensure that outputs and news from this project will be reported in the international media (for example, ZSL's camera trap pictures of okapi in the Watalinga forest were widely picked up by the print and broadcast media in September 2008). Information about this project and Darwin as the main funder will be available on the Virunga project page of the ZSL website (www.zsl.org/virunga), which has a blog updated by the DRC project team (www.zslblogs.org). In DRC, we will continue to regularly disseminate news about the park and conservation in local and national radio, print and broadcast media.

14. What will be the long term benefits of the project in the host country or region and have you identified any potential problems to achieving these benefits? (max 200 words)

The project will create a network of skilled individuals within ICCN and local communities that will ensure the sustainable management of natural resources beyond the project period. Additionally, it will provide a basis for enhanced collaboration between government agencies, communities, private companies and conservation and human rights NGOs for forest conservation across DRC. The project will provide infrastructure necessary to ensure the long term management of the Virunga-Hoyo landscape as well as establish methodologies and baselines for monitoring protected areas and other sites across DRC, and, critically, storing and managing the data generated centrally.

The availability of baseline data will permit national, regional and international decision-makers to implement the CBD in particular and will help ICCN and local communities to design appropriate site management plans. The development of an okapi conservation action plan during the multi-stakeholder workshop in the final year will provide a road map for the species' conservation. The establishment of an okapi email discussion group linking up conservationists and researchers in DRC, Uganda and internationally will help the design of surveys, dissemination of information and coordination of projects and funding applications in a region where distances are great and infrastructure poor, making physical contact challenging.

15. State whether or not the project will reach a stable and sustainable end point. If the project is not discrete, but is part of a progressive approach, give details of the exit strategy and show how

relevant activities will be continued to secure the benefits from the project. Where individuals receive advanced training, for example, what will happen should that individual leave? (Max 200 words)

ICCN staff will be trained as trainers and training manuals and equipment supplied so that the skills and experience built during this project remain at institutional- rather than individual-level. The standardisation of survey methodologies and the creation of a central database will facilitate data analysis and adaptive management. These mechanisms will help make monitoring a permanent activity across the okapi's range, with biodiversity information more readily available for use and reliable.

The project will initiate new transboundary initiatives which will help both DRC and Uganda meet obligations towards CITES. These initiatives should be supported beyond the Darwin project by EU and FFEM funds, which currently include plans for transboundary tourism in the northern sector of Virunga NP and Mt Hoyo Reserve.

Developing sustainable livelihoods underpinned by improved forest management in the Virunga-Hoyo region is one of the key aims of other proposals submitted by ZSL and partners, which will assist local communities in raising awareness of their property and land rights and with fundraising to help them access carbon (e.g. through the regulated UNFCCC REDD mechanism or via the voluntary carbon market) or other forms of forest finance (e.g. ecotourism), and income from alternative livelihoods such as agroforestry cocoa.

16. If your project includes training and development, please indicate how you will assess the training needs in relation to the overall purpose of the project. Who are the target groups? How will the training be delivered? What skills and knowledge do you expect the beneficiaries to obtain. How will you measure training effectiveness. (max 300 words)

You should address each of these points.

ICCN rangers, NGO field staff, M'buti pygmy trackers and community members will be the main groups trained, by the ZSL project manager and his team with the assistance of project partners experienced in relevant biomonitoring/socio-economic survey techniques. Many ICCN rangers have had some training before (e.g. ZSL training on wildlife monitoring techniques and species identification in Virunga NP), and we have already identified able/enthusiastic candidates to act as team leaders in Virunga-Hoyo and RFO, responsible for data analysis and reporting. Trainees will be re-evaluated during and after the training theory workshop and field component. Once familiar with GPS use, they will use these to collect standardised recce data and will then be trained in line transect (for analysis via Distance software) and camera trapping techniques, as well as faecal sample collection protocols. As generally the capacity of ICCN rangers overall is low, three months of on-the-job training during the surveys in their site will be particularly important.

The M'buti trackers, with less formal survey experience, will be trained in basic survey techniques to play a supporting role to the ICCN monitoring teams. They will be trained in the use of CyberTracker, free software utilising a simple icon- or query-based screen sequence that can be uploaded onto an integrated palmtop/GPS unit for use by illiterate or technologically-inexperienced surveyors. Data are then uploaded onto a laptop and can be immediately visualised and queried via GIS software, greatly facilitating the learning process. As all data are automatically temporally- and spatially-referenced, survey performance is easy to track and query.

The community assistants will be given theoretical/applied training in participatory and standard socio-economic data collection and also trained to use CyberTracker for interviews and participatory mapping. Both M'buti trackers and community assistants will be selected during community workshops, field-tested and the best retained.

LOGICAL FRAMEWORK

17. Please enter the details of your project onto the matrix using the note at Annex 3 of the Guidance Note. This should not have substantially changed from the Logical Framework submitted with your Stage 1 application. Please highlight any changes. (Use no smaller than Arial 10 pt)

Project summary	Measurable Indicators	Means of verification	Important Assumptions
Goal: Effective contribution in support of the implementation of the objectives of the Convention on Biological Diversity (CBD), the Convention on Trade in Endangered Species (CITES), 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.			
Sub-Goal: Ecosystem-wide conservation of forest biodiversity in DRC using okapi as a flagship across their range, with communities integrated into and benefiting from forest conservation	Intact and connected forest across central DRC and into eastern Uganda, maintaining biodiversity and ecosystem services and enabling long-term viability of populations of wide-ranging flagship species such as forest elephant and species subject to illegal cross-border trade with Uganda such as okapi, elephant, hippo, gorilla, chimpanzee and leopard	Reports of okapi and wildlife monitoring by NGOs/ ICCN/ communities across landscape Satellite monitoring of forest cover	
Purpose: Forest biodiversity across okapi range conserved with equitable benefits to local communities, through building capacity of park authorities to manage protected areas and the development of sustainable livelihoods which value forest ecosystem services alongside communities outside protected areas	Satellite monitoring shows reduction in the rate of forest loss within five years of end of project Biomonitoring by ICCN and local communities shows no reduction in flagship forest biodiversity indicator species within three to five years; elephant and other flagship species populations survive/return to Virunga-Hoyo forest corridor Sustainable land and forest resource use management plans implemented in Virunga-Hoyo region and benefiting communities, with average income increased by 50% from alternative sources such as carbon or shade-grown cocoa	Ongoing forest cover surveys by WCS/WWF and as part of Congo Basin-wide forest initiatives Annual monitoring reports overseen by ICCN DI closed project evaluation	Satellite imagery picks up real trends in deforestation/degradation ICCN continue annual monitoring throughout protected areas Continuing security in the landscape
Outputs: 1. Biodiversity, threats and resource needs of local people documented across okapi range and management interventions for conservation of okapi and other flagship species identified and disseminated using Virunga-Hoyo and RFO regions as case studies	1a. Baseline biodiversity surveys carried out in at least 5 sites across the okapi known range, using standardised population monitoring techniques (recces/transects/camera trapping), focusing on distribution/abundance of flagship species (okapi, elephant, hippo, gorilla, chimpanzee and leopard) (by yr 2) 1b. Baseline socio-economic information for communities in Mbau, Watalinga and Mt Hoyo regions, focusing on forest resource use (particularly bushmeat) and livelihoods (by yr 2) 1c. Two Congolese and 2 UK MSc student projects help provide information on ecology of okapi and sustainability of non timber forest product use by communities (yr 2) 1d. Genetic analysis of okapi faecal samples by PhD student to understand population structure and connectivity (by yr 3) 1e. Priority areas for okapi and other flagship species mapped and management actions required for their conservation	1a. Survey reports; peer-reviewed publications 1b. Survey reports; peer-reviewed publications 1c. MSc project dissertations; peer-reviewed publications 1d. PhD report (thesis will be completed after DI project end); peer-reviewed publications 1e. Maps of species distributions, relative abundance and threats; range-wide okapi conservation action plan	Continuing security in the landscape Communities engage with activities Suitable students can be recruited and funding is found for PhD study

	identified at multi-stakeholder (including ICCN and UWA) workshop (yr 3)		
2. Training of ICCN and local communities in biological and socio-economic monitoring techniques and community participatory work	<p>2a. 32 ICCN rangers across okapi range trained in flagship species monitoring (including camera trap data collection) via workshops and field surveys (yrs 1-2)</p> <p>2b. Four ICCN monitoring officers from across okapi range trained in monitoring data analysis and reporting (yrs 1-2)</p> <p>2c. Two Congolese and 2 UK MSc students trained in ecological and/or socio-economic research techniques (yr 2)</p> <p>2d. Six M'buti trackers trained in CyberTracker data collection to assist ecological studies on flagship species in Watalinga forest and Mt Hoyo Reserve (yr 1)</p> <p>2e. Six community members (50% female) in Virunga-Hoyo region trained in wildlife and forest resource monitoring (including GPS/CyberTracker data collection) and participatory socio-economic data collection (yr 1)</p>	<p>2a. Training workshop reports and training certificates; training manuals; monthly patrol/activity reports</p> <p>2b. Training workshop reports and training certificates; training manuals</p> <p>2c. MSc projects and degree certificates</p> <p>2d/e. Annual activity reports from ICCN and communities; training manuals</p>	<p>Suitable and sufficient government rangers are made available for training</p> <p>Local communities support and engage with project</p> <p>Suitable students can be recruited</p>
3. Capacity of ICCN and local communities to monitor, manage and conserve forest resources increased across okapi range with a focus on the Virunga-Hoyo landscape	<p>3a. Two forest patrol posts constructed/equipped in Virunga NP and Mt Hoyo Reserve; boat patrols along Semliki river (yrs 1-2)</p> <p>3b. Simple, long-term biomonitoring data collection and analysis protocols developed for use by ICCN/local communities (yr 1)</p> <p>3c. Workshop between ICCN, UWA and partners, to facilitate transboundary monitoring of wildlife, reduce illegal trade in forest products between DRC and Uganda and produce okapi conservation action plan (yr 3)</p> <p>3d. Awareness of Virunga-Hoyo communities raised of forest ecosystem services and payment options, land rights and tenure and okapi as iconic flagship species for DRC/local area (by yr 2)</p> <p>3e. Technical assistance to communities in Virunga-Hoyo landscape in identification of alternative livelihoods and development of proposal(s) for REDD/agroforestry/reforestation developed in conjunction with communities (by yr 3)</p> <p>3f. Establishment of sustainable land and forest resource use plan for Virunga-Hoyo landscape by communities (by yr 3)</p>	<p>3a. Annual project reports and ICCN monthly patrol reports</p> <p>3b. Biomonitoring manual; basic automated data analysis and GIS-mapping program</p> <p>3c. Workshop report; okapi action plan; IUCN Red List okapi re-assessment</p> <p>3d. Reports of community meetings/workshops with partners ESCO-Kivu and AAP; local radio broadcasts and newspaper articles (twice per year); socio-economic research</p> <p>3e. Proposal submitted to appropriate donor(s); funds for new project</p> <p>3f. Community land use plan; post-implementation evaluation report</p>	<p>Extra patrol post will help stabilise insecurity</p> <p>ICCN provides rangers and monitoring officer(s) with ongoing responsibility for monitoring and analysis in each site</p> <p>Communities see value in and have sufficient personal security for long-term commitment to forest conservation (e.g. REDD) and slow-growing cocoa/tree species</p> <p>Carbon from DRC can be sold on voluntary market or via REDD framework under UNFCCC</p>

Activities (details in workplan)

- 1.1 Technical expert steering group formed with representation from each partner organisation and others as agreed, and first meeting held in Beni or Goma.
- 1.2 Recce, transect and camera trap survey methodology for okapi and other flagship species agreed by technical steering group and then trialled in RFO alongside dung decay surveys.
- 1.3 Standardised baseline surveys by teams of ZSL field staff together with local ICCN or community-based staff employed by non-ICCN projects, via recces/transects/camera trapping and including collection of okapi faecal samples and dung decay surveys where feasible, carried out for approximately three months each in at least five sites across the known okapi range (provisionally Virunga-Hoyo, RFO, Maiko NP, Buta-Akiti and TL2). For camera trapping, 40 cameras will be spaced 1-2km in a grid for a minimum of 25 days (i.e. >1000 trap nights), with two replications per site.
- 1.4 Preliminary recce surveys carried out where possible in additional sites to assess the extent of their distribution and persistence in between protected areas (minimum 1-2 weeks per site).
- 1.5 Baseline socio-economic surveys carried out by community assistants in at least 4 communities each of Mbau, Watalinga and Mt Hoyo areas.
- 1.6 Congolese/Imperial College London MSc students collect and analyse data for projects alongside forest survey team and community assistants.
- 1.7 PhD student or supervisor from Cardiff participates in initial survey methodology meeting, and then student accompanies field teams to collect faecal samples and ensure correct procedures followed in terms of collection, labelling, recording and storage, training up ZSL and GIC staff members to ensure standard process is followed.
- 1.8 Field survey and genetic data from all sites analysed and mapped.
- 1.9 Multi-stakeholder workshop held to discuss findings and agree management actions required and fundraising strategy.
- 1.10 Okapi conservation action plan written up and report disseminated.
- 2.1 ICCN rangers, monitoring officers and community-based field staff from non-ICCN-managed areas trained in biomonitoring theory and methods at WCS training centre in RFO, including training in standardised recce, transect and camera trap methods, dung decay studies, faecal sample collection protocol, GPS/CyberTracker usage, data recording and basic data management, through classroom-based lessons and field training in Epulu area.
- 2.2 ICCN monitoring officers and community-based team leaders trained in data management, analysis and reporting.
- 2.3 MSc students trained on-the-job in biomonitoring and socio-economic techniques and data analysis (as relevant) by ZSL field staff and data collection protocol reviewed by UK-based supervisors before start of fieldwork.
- 2.4 M'buti trackers trained in CyberTracker icon-based data collection (for forest surveys).
- 2.5 Community assistants selected and trained in CyberTracker data collection (for socio-economic surveys) and participatory socio-economic data collection via structured and semi-structured interviews and focus groups.
- 3.1 Patrol posts constructed at Lamiya in the Watalinga forest of Virunga NP (on the Uganda border) in year 1 and in Mt Hoyo Reserve in year 2.
- 3.2 Outboard engine and piroque purchased.
- 3.3 Monthly patrols by ICCN rangers up Semliki river and elsewhere in Watalinga forest of Virunga NP.
- 3.4 Biomonitoring data collection and analysis protocols (including central database) and training modules for okapi and other wildlife developed for use by ICCN (adapted from those developed by ZSL for Watalinga this year, as well as by other partners, and options for harmonisation with patrol-based systems explored), with initial input and subsequent oversight by technical steering group.
- 3.5 Multi-stakeholder workshop held as for activity 1.10, including discussion of transboundary monitoring and trade controls with UWA.
- 3.6 Initial focus groups held in at least 4 communities each of Mbau, Watalinga and Mt Hoyo areas to discuss issues of sustainable natural resource use, options for alternative livelihoods and raise awareness of okapi and forest conservation.
- 3.7 Participatory mapping with communities of key resources, land use and boundaries of community forest area
- 3.8 Regular (at least twice-yearly) radio broadcasts and newspaper articles on okapi and forest conservation across DRC and in the Virunga-Hoyo region.
- 3.9 Workshops with Mbau, Kamango and Mt Hoyo collectivities (facilitated by chefs de canton in each area) to disseminate results of socio-economic research, identify feasible alternative livelihood options and develop proposals for funding or help engagement with ongoing initiatives such as ESCO-Kivu's agroforestry work.
- 3.10 Assistance to communities of Mbau, Kamango and Mt Hoyo in drawing up of land and resource use plan for their area.
- 3.11 Assistance in fundraising and access to in-country or expatriate technical support for community projects.

Monitoring activities:

- Indicator 1: Survey reports; monthly patrol records; annual ICCN biomonitoring reports; community-based soc-economic survey report; MSc student dissertations; peer-reviewed papers; genetics PhD report and map of okapi population structure and connectivity; maps of okapi/wildlife distribution and threats; okapi and potentially also other species action plans
- Indicator 2: Training programmes, data collection protocols and reports; training certificates; CyberTracker data collection sequences; MSc student dissertations
- Indicator 3: Patrol posts; boat and monthly river and foot patrol records; biomonitoring manuals; database for biomonitoring information; final workshop report; okapi conservation action plan; community workshop reports; participatory maps; records of print, radio and broadcast media; records of households registered for agroforestry and other sustainable livelihoods initiatives; fundraising applications submitted; fundraising applications successful/new projects active; DI closed project evaluation

18. Provide a project implementation timetable that shows the key milestones in project activities. Complete the following table as appropriate to describe the intended workplan for your project.

Activity	Months	Year 1				Year 2				Year 3			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1.1 Technical expert steering group formed and first meeting held	0.25	X											
1.2 Survey methodology for okapi and other flagships agreed by technical steering group and trialled in RFO alongside dung decay surveys	2	X											
1.3 Standardised baseline surveys, carried out for approximately three months each in at least five sites	20	X	X	X	X	X	X	X	X				
1.4 Preliminary recce surveys carried out where possible in additional sites	2			X	X	X	X	X	X	X	X	X	
1.5 Baseline socio-economic surveys carried out by community assistants in at least 4 communities each of Mbau, Watalinga and Mt Hoyo areas	18			X	X	X	X	X	X				
1.6 MSc students collect and analyse data for projects alongside forest survey team and community assistants	6					X	X						
1.7 PhD student participates in initial survey methodology meeting, and accompanies field teams to collect faecal samples, training up ZSL and GIC staff members to ensure standard process is followed	7	X			X	X							
1.8 Field survey and genetic data from all sites analysed and mapped	12								X	X	X	X	
1.9 Multi-stakeholder workshop held to discuss findings and agree management actions required and fundraising strategy	0.25											X	
1.10 Okapi conservation action plan written up and report disseminated	3											X	X
2.1 ICCN rangers, monitoring officers and community-based field staff trained in biomonitoring theory and methods at WCS training centre in RFO, through classroom-based lessons and field training in Epulu area	0.5	X											
2.2 ICCN monitoring officers and community-based team leaders trained in data management, analysis and reporting	1 (2 x 0.5)	X		X									
2.3 MSc students trained on-the-job in biomonitoring and socio-economic techniques and data analysis by ZSL field staff and data collection protocol reviewed by UK-based supervisors before start of fieldwork	1					X	X						
2.4 M'buti trackers trained in CyberTracker icon-based data collection (for forest surveys)	0.5	X											
2.5 Community assistants selected and trained in CyberTracker and participatory socio-economic data collection via structured and semi-structured interviews and focus groups	0.5		X										
3.1 Patrol posts constructed at Lamiya in the Watalinga forest of Virunga NP (on the Uganda border) in year 1 and in Mt Hoyo Reserve in year 2	2 (2 x 1)			X		X							

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3.2	Outboard engine and piroque purchased		X											
3.3	Monthly patrols by ICCN rangers up Semliki river in Watalinga forest of Virunga NP	36	X	X	X	X	X	X	X	X	X	X	X	X
3.4	Biomonitoring data collection and analysis protocols (including database) and training modules for okapi and other wildlife developed, with initial input and subsequent oversight by technical steering group	4	X	X	X	X								
3.5	Multi-stakeholder workshop held as for activity 1.10, including discussion of transboundary monitoring and trade controls with UWA	0.25											X	
3.6	Initial focus groups held in at least 4 communities each of Mbau, Watalinga and Mt Hoyo areas to discuss issues of sustainable natural resource use, options for alternative livelihoods and raise awareness of okapi and forest conservation	12			X	X	X	X						
3.7	Participatory mapping with communities of key resources, land use and boundaries of community forest area	12				X	X	X	X					
3.8	Regular (at least twice-yearly) radio broadcasts and newspaper articles on okapi/forest conservation across DRC and in Virunga-Hoyo region	1.5		X		X		X		X			X	X
3.9	Workshops with Mbau, Kamango and Mt Hoyo collectivities to disseminate results of socio-economic research, identify feasible alternative livelihood options and develop proposals for funding or help engage with ongoing initiatives such as ESCO-Kivu's agroforestry work	1.5								X				
3.10	Assistance to communities of Mbau, Kamango and Mt Hoyo in drawing up of land and resource use plan for their area	1.5								X				
3.11	Assistance in fundraising and access to in-country or expatriate technical support for community projects	24					X	X	X	X	X	X	X	X

19. Please indicate which of the following Standard Measures you are likely to report against. You will not necessarily plan to cover all these Standard Measures in your project. Separate guidance on Standard Measures can be found at http://darwin.defra.gov.uk/resources/reporting/standard_measures/

Standard Measure No	Description	Tick if Relevant
1A	Number of people to submit thesis for PhD qualification (in host country)	
1B	Number of people to attain PhD qualification (in host country)	
2	Number of people to attain Masters qualification (MSc, MPhil etc)	√
3	Number of people to attain other qualifications (ie. Not outputs 1 or 2 above)	
4A	Number of undergraduate students to receive training	
4B	Number of training weeks to be provided	
4C	Number of postgraduate students to receive training	√
4D	Number of training weeks to be provided	√
5	Number of people to receive at least one year of training (which does not fall into categories 1-4 above)	√
6A	Number of people to receive other forms of education/training (which does not fall into categories 1-5 above)	
6B	Number of training weeks to be provided	
7	Number of (ie different types - not volume - of material produced) training materials to be produced for use by host country	√
8	Number of weeks to be spent by UK project staff on project work in the host country	√
9	Number of species/habitat management plans (or action plans) to be produced for Governments, public authorities, or other implementing agencies in the host country	√
10	Number of individual field guides/manuals to be produced to assist work related to species identification, classification and recording	√
11A	Number of papers to be published in peer reviewed journals	√
11B	Number of papers to be submitted to peer reviewed journals	√
12A	Number of computer based databases to be established and handed over to host country	
12B	Number of computer based databases to be enhanced and handed over to host country	√
13A	Number of species reference collections to be established and handed over to host country(ies)	
13B	Number of species reference collections to be enhanced and handed over to host country(ies)	
14A	Number of conferences/seminars/ workshops to be organised to present/disseminate findings	√
14B	Number of conferences/seminars/ workshops attended at which findings from Darwin project work will be presented/ disseminated.	√
15A	Number of national press releases in host country(ies)	√
15B	Number of local press releases in host country(ies)	√
15C	Number of national press releases in UK	√
15D	Number of local press releases in UK	
16A	Number of newsletters to be produced	√
16B	Estimated circulation of each newsletter in the host country(ies)	√
16C	Estimated circulation of each newsletter in the UK	
17A	Number of dissemination networks to be established	√
17B	Number of dissemination networks to be enhanced/ extended	
18A	Number of national TV programmes/features in host country(ies)	√
18B	Number of national TV programmes/features in UK	√
18C	Number of local TV programmes/features in host country(ies)	√
18D	Number of local TV programmes/features in UK	
19A	Number of national radio interviews/features in host county(ies)	√
19B	Number of national radio interviews/features in UK	
19C	Number of local radio interviews/features in host country(ies)	√
19D	Number of local radio interviews/features in UK	
20	Estimated value (£'s) of physical assets to be handed over to host country(ies)	√
21	Number of permanent educational/training/research facilities or organisations to be established and then continued after Darwin funding has ceased	
22	Number of permanent field plots to be established during the project and continued after Darwin funding has ceased	√
23	Value of resources raised from other sources (ie in addition to Darwin funding) for project work	√

PROJECT BASED MONITORING AND EVALUATION

20. Describe, referring to the Indicators in the Logical Framework, how the progress of the project will be monitored and evaluated, including towards delivery of its outputs and in terms of achieving its overall purpose. This should be during the lifetime of the project and at its conclusion. Please include information on how host country partners will be included in the monitoring and evaluation.

ZSL will carry out its own internal monitoring through monthly technical and financial reports from the team in Virunga NP to ZSL's London HQ. These reports will be assessed against the project timeline and budget to ensure activities take place on schedule and to budget. Regular financial and technical reports will also be sent to Darwin for similar evaluation of the project's progress. ZSL London HQ staff will make regular visits to DRC (at least annually) and the in-country project manager will spend some days in London each year to enable regular appraisal of project progress and activity planning.

In addition, established reporting guidelines for all ICCN's NGO partners will be followed. These require that all activities are included in ICCN's annual operational plan for the relevant protected area and that technical and financial project reports are submitted to ICCN once a year ahead of a project evaluation visit by the ICCN General Direction. Stakeholder meetings are held every six months at site (CoCoSi) and national (CoCoCongo) level to plan future activities and evaluate those being carried out. These give the opportunity for ICCN to monitor projects taking place in the park and for other stakeholders to be kept informed.

ICCN personnel will be required to provide their superiors with monthly patrol and biomonitoring reports, including data on wildlife and illegal activities which will be used to monitor their work. Resource use and threats to okapi and other biodiversity will be evaluated via regular reports to the ZSL project manager by the community assistants and MSc project dissertations. Progress towards defining the status of okapi and agreeing recommendations for its conservation across its range will be evaluated through the final biomonitoring survey report, multi-stakeholder workshop minutes and okapi action plan. [Indicators 1 and 3]

At the commencement of the project the capacity of personnel to be trained will be assessed to determine their knowledge and skills. This will be repeated following the completion of their training to determine the success of the training. A log of all ICCN staff and other personnel trained, along with the relevant training manuals and materials, will be submitted to ICCN's General Direction following the completion of all courses. [Indicator 2]

Community-based workshop reports, community maps and land use plans and proposals for funding will provide evidence of the development of alternative livelihoods for communities in the Virunga-Hoyo landscape. [Indicator 3]

Finally, the project's progress and outputs will be guided and evaluated by a technical expert steering group set up in month 1. This group will be composed of representatives of all partner organisations and coordinated by ZSL. It will convene in person or remotely at least every 6 months following the receipt of a technical report from the ZSL project manager, and also trouble-shoot when required via email.

FUNDING AND BUDGET

Please complete the separate Excel spreadsheet which will provide the Budget information for this application. Some of the questions below refer to the information in this spreadsheet.

NB: Please state all costs by financial year (April to March). Use current prices – and include anticipated inflation, as appropriate up to 3% per annum. The Darwin Initiative will not be able to agree increases in grants to cover inflation on UK costs once grants are awarded.

21. How is your organisation currently funded? (max 100 words)

ZSL, which includes two zoos, a scientific institute (the Institute of Zoology) and the Conservation Programmes department, receives around 75% of its funding from revenue generated through zoo gate receipts. A further 10% is received by the Institute through the Higher Education Funding Council for England. Grants, donations and contracts for conservation and research make up the remainder, generated from a range of sources including research councils, individual and multilateral governments (e.g. UK and US government departments, European Commission), private and corporate donors (e.g. Timbmet), foundations (e.g. Rufford Maurice Laing Foundation) and non-governmental bodies (e.g. IUCN).

22. Provide details of all confirmed funding sources identified in the Budget that will be put towards the costs of the project, including any income from other public bodies, private sponsorship, donations, trusts, fees or trading activity. Please include any additional unconfirmed funding the project will attract to carry out addition work during or beyond the project lifetime. Indicate those funding sources which are confirmed.**Confirmed:**

ZSL is providing matched funding for key UK staff salaries throughout the project (£XXX) as well as certain items of equipment in year 1, overheads and audit costs, amounting to a total of £87,635. Cardiff University is providing matched funding in the form of the PhD student stipend and supervisor's time throughout the project as well as laboratory equipment and international travel and field costs. The two Imperial College London MSc students will be self-funded or will have studentships to cover their time and international travel and field costs (.

In addition to the considerable matched funding that ICCN will provide in the form of ranger salaries, patrol rations and equipment and travel costs, ZSL currently has the use of an old Landrover which is now officially the property of ICCN following the end of our previous EU project (however due to its age and unreliability and the requirement for considerable travel to field sites on DRC's poor roads for this project, we now require an additional vehicle).

Unconfirmed:

We have a number of relevant submitted proposals awaiting a decision on funding, all of which are led by ZSL and focus on the Virunga-Hoyo region. These include a joint proposal for a total of £2 million by ZSL, WCS, WWF, ESCO-Kivu and the Conservation Company to the Congo Basin Forest Fund, for a three-year project focused on working with communities to reduce deforestation and alleviate poverty in the Virunga-Hoyo region by developing a REDD, shade-grown cocoa agroforestry and school tree nursery project, a similar proposal to the EC's ENRTP programme between ZSL, WCS and ESCO-Kivu for €2.45 million, and a £500,000 proposal over five years to DfID's Civil Society Challenge Fund to build the capacity of and empower communities to develop REDD and agroforestry alternative livelihoods in collaboration with AAP. All these projects will provide both matched funding and enable an increase in the extent of the community-based activities proposed here, as well as provide continuity in terms of funding. In addition, proposals to support biomonitoring and okapi conservation in the Virunga-Hoyo landscape have been submitted to the African Development Bank/Economic Community of Central African States (\$499,027 over three years) and to the Mohamed bin Zayed Species Conservation Fund (\$24,950 over six months) and we will also apply to the US Fish and Wildlife Service's Wildlife Without Borders-Africa fund for a grant of \$50,000 to follow on from our current grant.

23. Please give details of any further funding resources (confirmed or unconfirmed) sought from the host country partner (s) or others for this project that are not already detailed in the Budget or Question 22. This will include donations in kind or un-costed support eg accommodation. (max 50 words per box)

Financial resources:
Funding in kind:
<p>Advice and support will be provided by colleagues from all our partner organisations, including the Director General of ICCN, Benoit Kisuki, the Chief Scientist of ICCN, Dr Georges Muamba Tshibusu, the Conservators of the northern sector of Virunga NP and Mt Hoyo Reserve, the ICCN North Kivu Provincial Director and the Deputy Provincial Director, Norbert Mushenzi, who is our main contact point on this project. While their time and that of our NGO and academic colleagues has not been included in the budget as matched funding, they have each already given considerable time to this project and will continue to do so.</p> <p>Our <i>Accord Cadre</i> with the Congolese government and Memorandum of Understanding with ICCN should mean that project equipment and expatriate salaries are tax-free.</p>

FCO NOTIFICATIONS

Please check the box if you think that there are sensitivities that the Foreign and Commonwealth Office will need to be aware of should they want to publicise the project's success in the Darwin competition in the host country.

Please indicate whether you have contacted the local UK embassy or High Commission directly to discuss security issues (see Guidance Notes) and attach any advice you have received from them.

Yes (no written advice)



Yes, advice attached



No



CERTIFICATION 2010/11

On behalf of the trustees of Zoological Society of London

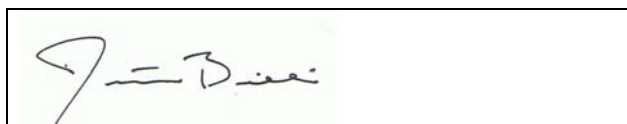
I apply for a grant of £121,879 in respect of expenditure to be incurred in the financial year ending 31 March 2011 on the activities specified in the above application.

I certify that, to the best of our knowledge and belief, the statements made by us in this application are true and the information provided is correct. I am aware that this application form will form the basis of the project schedule should this application be successful. (This form should be signed by an individual authorised by the lead UK institution to submit applications and sign contracts on their behalf.)

I enclose a copy of the organisation's most recent audited accounts and annual report, CVs for project principals and letters of support.

Name (block capitals)	PROFESSOR JONATHAN BAILLIE
Position in the organisation	DIRECTOR OF CONSERVATION PROGRAMMES

Signed



Date:

30/11/09

Stage 2 Application - Checklist for submission

	Check
Have you provided actual start and end dates for your project?	Y
Have you provided your budget based on UK government financial years ie 1 April – 31 March?	Y
Have you checked that your budget is complete, correctly adds up and that you have included the correct final total on the top page of the application?	Y
Is the concept note within 1,000 words?	Y
Is the logframe no longer than 2 pages and have you highlighted any changes since Stage 1?	Y
Has your application been signed by a suitably authorised individual? (clear electronic or scanned signatures are acceptable in the email, but a wet signature should be provided in the hard copy version)	Y
Have you included a 1 page CV for the Project Leader, any other UK staff working 50%+ on this project, and for a main individual in each overseas partner organisation?	Y
Have you included a letter of support from the main overseas partner organisations?	Y
Have you checked with the FCO in the project country/ies and have you included any evidence of this?	Y – advice pending
Have you included a copy of your most recent annual report and accounts? An electronic link to a website is acceptable. http://static.zsl.org/files/annual-review-2008-780.pdf http://static.zsl.org/files/zsl-trustees-and-financial-statements-311208-779.pdf	Y – links at left
Have you read the Guidance Notes ?	Y

Once you have answered Yes to the questions above, please submit the application, not later than midnight GMT on **Monday 30 November 2009** to Darwin-Applications@ltsi.co.uk using the application number (from your Stage 1 feedback letter) and the first few words of the project title **as the subject of your email**. However, if you are e-mailing supporting documentation separately please include in the subject line an indication of the number of e-mails you are sending (eg whether the e-mail is 1 of 2, 2 of 3 etc). **In addition**, a signed hard copy of the application and any supporting documents not available electronically should be submitted to the Darwin Applications, c/o LTS International, Pentlands Science Park, Bush Loan, Penicuik EH26 0PL **postmarked** not later than **Tuesday 1 December 2009**.

DATA PROTECTION ACT 1998: Applicants for grant funding must agree to any disclosure or exchange of information supplied on the application form (including the content of a declaration or undertaking) which the Department considers necessary for the administration, evaluation, monitoring and publicising of the Darwin Initiative. Application form data will also be held by contractors dealing with Darwin Initiative monitoring and evaluation. It is the responsibility of applicants to ensure that personal data can be supplied to the Department for the uses described in this paragraph. A completed application form will be taken as an agreement by the applicant and the grant/award recipient also to the following:- putting certain details (ie name, contact details and location of project work) on the Darwin Initiative and Defra websites(details relating to financial awards will not be put on the websites if requested in writing by the grant/award recipient); using personal data for the Darwin Initiative postal circulation list; and sending data to Foreign and Commonwealth Office posts outside the United Kingdom, including posts outside the European Economic Area. Confidential information relating to the project or its results and any personal data may be released on request, including under the Environmental Information Regulations, the code of Practice on Access to Government Information and the Freedom of Information Act 2000.