



Department
for Environment
Food & Rural Affairs



Darwin Initiative Newsletter

April 2013

Welcome to another issue of the Darwin Initiative newsletter and the first one of 2013 - the Darwin Initiative's 21st year.

We've just completed Round 19 of funding for the Darwin Initiative. It has been a very successful year with many excellent applications received. Below we provide a quick update on the number of applications received and funded.

The Darwin Expert Committee were kept busy for much of 2012 and 2013 reviewing all the applications that came through. As usual the quality of applications received was exceptionally high which made the job of recommending projects for funding particularly difficult.

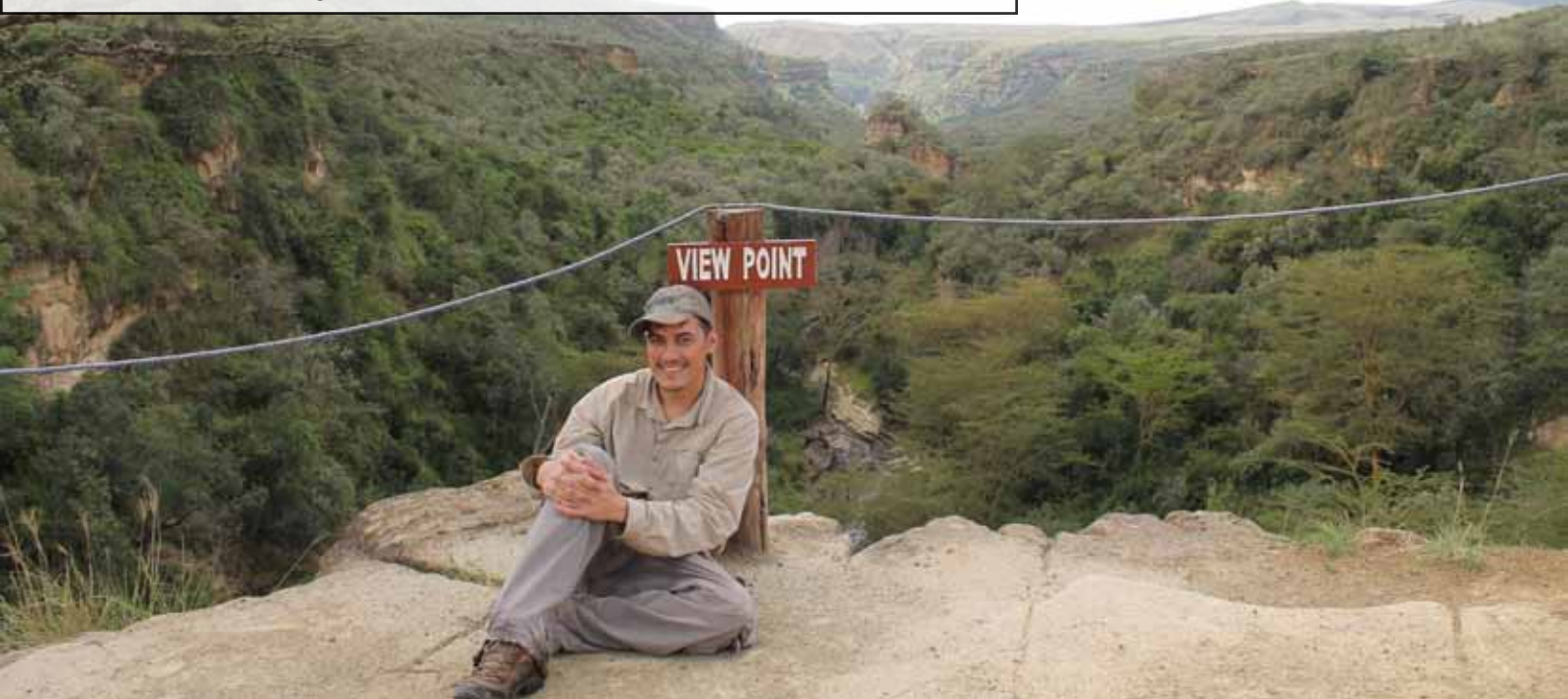
Round 19 was also the first year in which projects were requested to meet the dual objectives of biodiversity conservation AND address poverty alleviation. As a result we have a portfolio of projects funded this year which should be of great interest to the wider conservation community as they begin to report back their successes. We are currently working on strengthening the guidance materials and application forms following feedback from applicants this year with a new call for applications expected in the summer of 2013.

We recently said farewell to Professor David Macdonald, the Chair of the Darwin Expert Committee. David has been Chair of the Committee for 8 years and we have benefited from his guidance and direction. In addition to his guidance, David has been a great champion of the Darwin Initiative helping us to retain support for the excellent work that is carried out with Darwin Initiative funding.

While we are sad to say goodbye to David, he has a very worthy successor in the guise of Professor Stephen Blackmore, currently the Regius Keeper (Chief Executive) of the Royal Botanic Garden, Edinburgh. Stephen will bring to the role of Chair an impressive track record in the field of biodiversity, and a huge enthusiasm to champion the Darwin Initiative in its next phase

| Funding Scheme | Total Applications received | Projects Funded |
|----------------|----------------------------------|-----------------|
| Main Projects | 334 (244 stage 1, 91 Stage 2) | 25 |
| Post Projects | 11 | 3 |
| Scoping Awards | 30 | 11 |
| Fellowships | 8 | 6 |
| Darwin Plus | 44 | 14 |

To find out more, check out the website darwin.defra.gov.uk and Twitter [@Darwin_Defra](https://twitter.com/Darwin_Defra).



Said Gutierrez Darwin Initiative Fellow (EIDPS029)

Three years ago was the start of the journey that has now lead to an amazing series of events in my professional development.

Belize is a small country in Central America with a rather small human population but with incredible biodiversity considering its location in the Americas. It is here that I started working towards a career in conservation and wildlife research. While having this much wilderness around it is still common to have many people unaware of the true value of nature. I joined a research team from the University of Belize funded by the Darwin Initiative and it perhaps made the biggest impact in my way of thinking.

Working on a project with mammals, particularly prey species was an exciting career path for me (17-012 Belize large mammal corridor project). Along the way it was clear that conservation is not just protection of wildlife and habitats but rather a holistic approach including humans and our interaction with nature. As a result, I set my sights on the future and set goals that I intended to achieve as I worked my way through wildlife research and conservation in Belize. The project work has made a big difference in building awareness about conservation of species and their habitat in Central Belize. Although this is not the only conservation initiative in the country it remains one of the

most active. As the project was coming to an end I aimed to pursue and develop my career even further.

I was fortunate to join a new global conservation team as a Darwin Initiative Fellow and now I am pursuing an MSc in Conservation and Biodiversity at the University of Exeter. One of the major highlights of the program is the exposure to global conservation issues and the motivation to carry on with new initiatives. Throughout the past months the learning experience has been remarkable. From making new friends to connecting with conservation experts around the world, this has all been more than I anticipated.

A field course to Kenya in East Africa made this an experience of a lifetime. Learning about the conservation initiatives and issues in an entirely different environment was quite an experience. A few issues were obvious from the start of the trip. Poverty in a developing country is nothing new but how can a country protect its wildlife while working towards the betterment of its own population? It's a difficult question to answer with varying interpretations. Despite the hardships it is possible to live side by side with nature and benefit mutually if the right strategies are used. But it doesn't come without limitation. Management of protected areas for mega fauna in Kenya is doing rather well in my opinion but with mounting pressures from development and poaching it is difficult to tell what the future holds for conservation. It is very similar to the issues that conservation

faces in other developing countries. But words cannot describe how incredible it feels to see the majestic animals in the wild in Kenya. From the abundance of bird life in Lake Nakuru to the Elephants roaming the savannah in the Masai Mara, Kenya is an absolutely stunning place to visit. A greater appreciation of nature is what I will take back home from this experience. We

learn something new every day and as far as I can see there is a lot more out there than meets the eye. Darwin Fellow, conservationist, ecologist, environmentalist they all are the definition of my experience.

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Swidden plots are cultivated for two years before being returned to fallow, which is also utilized for harvesting planted fruits and for hunting Credit R Carmenta



Smallholder fire management in the Brazilian Amazon (17-023)

Wildfires pose a significant threat to both environment and society in tropical forest regions. Although humid tropical forests would not normally have burnt, wildfires are now prevalent due to climatic change, forest degradation and agricultural expansion. In recent decades the tropical forests of the Brazilian Amazon have experienced catastrophic wildfires that have ignited national and international concerns. They are now seen

as one of the most important threats currently facing the Amazon.

This Darwin Initiative funded project (September 2009 – February 2013) sought to reduce the prevalence of Amazonian wildfires by linking inter-disciplinary research with environmental education, training, and capacity building.

The project has recently delivered two key outputs – an interdisciplinary PhD, and a series of short films examining local perspectives on fire-use which are being disseminated on Youtube (<http://www.youtube.com/user/slashandburn2013/videos?flow=grid&view=1>).

The PhD “From Earth Observation to

Ethnography” was undertaken by Rachel Carmenta, based at Lancaster Environment Centre in the UK and Museu Paraense Emílio Goeldi in Brazil. She addressed the dynamics of smallholder fire management within sustainable use reserves in the Brazilian Amazon.

Smallholders are an important agent in the fire discourse due to the annual fires set in swidden sites to clear the land and deliver nutrients to the soil for planting. However, their fire management practices were poorly understood prior to this research, which focussed on several communities along the River Arapiuns.

The research has provided a number of important insights into the human dimensions of fire and the role of sustainable use reserves and fire management policy in mitigating fire prevalence and has outlined clear pathways for improved management intervention and future research. The project shows that: sustainable use reserves do not reduce fire prevalence and instead fire is determined by patterns of human settlement and transport infrastructure; multiple practices for fire management (not just fire breaks) are undertaken by smallholders,

although they are constrained by limited technological capacity to alter or improve these methods; there are complex relationships between fire management practices and household demography and livelihoods which are ignored by current fire policies.

Our fire films examine why and how Amazonian smallholders use fire, and highlight some of the problems they encounter with escaped fires. They then explore potential solutions to these issues, including the potential for mechanised agriculture in some areas. The films were produced by Luke Parry and Jos Barlow (Lancaster Environment Centre in the UK and Museu Paraense Emílio Goeldi in Brazil) in partnership with Tania Cypriano (Viva! Films). Films are in both Portuguese and English, and can be accessed at <http://www.youtube.com/user/slashandburn2013>.

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Smallholders practice forms of fire management, including using back-burns and burning after some rains
Credit R Carmenta



Early morning fishers Koh Rong Cambodia Credit J Holden and FFI

Underpinning the design and management of Cambodia's first Marine Protected Area (19-005)

Well-designed and well-managed Marine Protected Areas (MPAs) are widely believed to be one of the most effective tools for combating overexploitation and degradation of marine habitats as well as improving the well-being of the women and men who depend on marine resources for their livelihoods. Cambodia has expressed its commitments to the Convention on Biological Diversity and other treaties to conserve Cambodia's coastal biodiversity; however, until recently, efforts to meet these commitments have been severely constrained by a lack of training, experience and resources.

In 2012, Fauna & Flora International and partners Coral Cay Conservation and the

Royal Government of Cambodia's Fisheries Administration were awarded a Darwin Initiative grant to ensure the effective design and establishment of Cambodia's first MPA – an area of 300 km² around the islands of Koh Rong and Koh Rong Sanloem. The project is providing essential technical support to Fisheries Administration which will underpin the design of this and subsequent MPAs in the country.

One of the critical activities in the first year of the project has been to introduce the ideas of collaborative management and consultation, concepts that represent something of a paradigm shift from the centralised government approaches that Cambodia is more familiar with. In order for an MPA to be successful, the various needs of people, business and biodiversity must be fed into the design process.

Consultation activities are now underway, starting with Community Fisheries (community-based organisations representing local marine

resource users) within the proposed MPA. Project partners have been carrying out participatory mapping of the proposed MPA with these Community Fisheries in order to identify and document local priorities for management and conservation.

Mr Huot Vuthy, Deputy Head of Fisheries Endangered Species Division comments that, *“The process is running smoothly and communities are providing their thoughts on locations for different zones such as conservation areas and community areas.*

Through these discussions, communities have developed a greater understanding of – and support for – the proposed marine protected area.”

The findings from the community mapping exercise will be fed into the proposed zoning plan for the MPA and will ensure community involvement in management decisions. Other stakeholders such as the private sector will also be consulted in the next phase of the project.

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Developing Native Seed Mixes for Habitat Restoration in the Falklands (EIDCF014)

Erosion is a significant threat to habitats in the Falkland Islands. From the air, large areas of bare sand, clay or peat extend beneath you and are seen encroaching on Important Plant Areas. Local farmers are acutely aware of the erosion problem too, not only because it represents a

loss of productive pasture but also because of the economic cost of dust contamination in the fleeces of their sheep. Currently landowners have no options for efficiently re-vegetating bare ground with native species as the only commercially available seeds are from non-native species. These are often ill-adapted to the harsh growing conditions of the Falklands and have poor long term survival. Furthermore, following other forms of habitat degradation such as wildfire, development or the removal of an invasive species there is very little that can be done to prevent the acceleration of



Seed heads of target species *Acaena magellanica* Credit A Davey



Conservation volunteer collecting *Poa alopecurus* on Middle Island Credit K Rexer-Huber

erosion. To date restoration work has focussed on planting tillers of native grasses; however this approach is limited to very few species on a single substrate and it is extremely labour intensive.

Local NGO Falklands Conservation, in partnership with the Royal Botanic Gardens, Kew and the Millennium Seed Bank has been awarded a Darwin Challenge Fund to develop two seed mixes from native plant species for future use in restoration. In consultation with the Falkland Islands Government Department of Agriculture and using botanical data previously collected by Falklands Conservation, a suite of 15 species was selected for collection on the grounds of colonising ability and grazing value. The species will be used in two mixes, one that contains species which rapidly provide ground cover and another containing a wider range of pasture species which are palatable to livestock. Over the summer in the Islands a total of 65 large seed collections have been made by

staff, landowners and conservation volunteers from the local community. The collections are now in the process of being transported back to the UK for cleaning and storage at the Millennium Seed Bank. Trials of germination and establishment of these seeds will hopefully be undertaken as part of a full Darwin Plus award.

Before the conclusion of the project in May 2013, discussion with the Falkland Island Government and landowners will secure permission to carry out large scale field trials at comparable eroded sites across the islands. Together with the collections of seed, this will leave the stage set for a full Darwin Plus project to provide a robust toolkit for Falkland Islanders to tackle the problem of erosion in a way that marries both agricultural and conservation objectives.

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Conservation volunteer collecting *Poa flabellata* on East Falkland Credit A Davey



Measuring a sea turtle caught during a fishery trial using LED lights to reduce bycatch Credit ProDelphinus

Helping make sustainable artisanal fisheries a reality in Peru (18-001)

Peru has abundant and globally important natural resources, but concerns for marine biodiversity and conservation have been lagging. One area in need of urgent action is work to better understand Peru's many small scale fisheries and their interactions with marine fauna – including sea turtles, seabirds, marine mammals and sharks - and to promote long term sustainability of these fleets.

Now entering its fourth year, the Darwin Sustainable Artisanal Fisheries Initiative in Peru (SAFI), has made significant advances in promoting improved sustainability in these fisheries. Project staff from the University of Exeter, in close collaboration with Peruvian NGO ProDelphinus, Peru government partners and local fishermen, have been working on many fronts along Peru's long coast testing and implementing solutions, training fishermen and raising awareness of the marine environment.

PD president and Darwin Research Fellow Dr. Joanna Alfaro-Shigueto noted, *"We are very encouraged by the enthusiasm and interest expressed by fishermen to make their fisheries more sustainable, but there's more work still to do to make these fisheries truly sustainable."*

To increase environmental awareness, ProDelphinus has designed and distributed educational materials for a wide range of audiences – from species identification guides to elementary school lesson plans to sea turtle and seabird safe handling and release guides. We also continue to work directly with fishermen, training them in a variety of marine conservation topics. During the first years of the SAFI project, we have conducted talks and workshops at over 30 ports attended by hundreds of fishermen. We have also prepared newsletters to keep fishermen apprised of the SAFI project and how it can help them. The SAFI project also works with key agency decision-makers like Servicio Nacional de Áreas Naturales Protegidas por el Estado (SERNANP), Instituto del Mar del Perú (IMARPE), and the Ministry of the Environment (MINAM) by sharing our project results so they can inform management plans.

The SAFI project has also been working closely with fishermen to quantify and reduce the incidental catch (bycatch) of protected fauna such as sea turtles, seabirds, and dolphins. We have been testing and implementing a number of novel, low-cost technologies designed to reduce the bycatch of seabirds, sea turtles, dolphins and porpoises. Our work with LED lights on gillnets has reduced sea turtle bycatch by 50%. Trials with acoustic alarms (pingers) on driftnet vessels have reduced dolphin and porpoise bycatch by 40%. We also continue to distribute other gear, including weighted swivels, de-hookers and line-cutters, all designed to reduce seabird and sea turtle bycatch and to help release animals safely.

In another exciting initiative, in February 2013, the SAFI project helped organize an association of artisanal fishermen under the name “Friends of Nature”. The goal of this association is to bring together fishermen from many ports interested in conservation to share their experiences and learn from each other how best to mitigate bycatch and make their

fisheries more sustainable.

As additional motivation to fishermen participating with the SAFI project we are helping link them to markets for their sustainable catch. We have engaged chefs from several restaurants to help promote sustainable fishing. We have also created a group on Facebook: “PESCA DEL DIA” (“Catch of the Day”) where chefs, biologists, and the general public share information about the tools for promoting sustainable fishing. Upcoming plans include developing a brochure and seafood guide mobile app with information for restaurants and buyers at ports designed to increase the market for sustainable fish products in restaurants and hotels.

For more information on the SAFI project activities visit www.prodelphinus.org, ProDelphinus on Facebook or www.blogprodelphinus.blogspot.com.

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Local Communities Protect the Mali Elephants from War (19-010)

Nature conservation, firmly rooted in the empowerment of local people, pays dividends in times of war, turbulence and uncertainty.

Like everyone, we were taken by surprise by the coup and the subsequent events. All government presence vanished from the project area and it became lawless, guns proliferated and three elephants were killed. We had to think fast about how to protect the elephants while maintaining the momentum of the project. What were the threats, how would they play out, and what assets did we have on which to base our strategy?

Activities continued through using motor-bikes instead of highjack-prone vehicles, and one major initiative involved mobilising 520 young volunteers to create “vigilance networks” across the elephant range. This was in part a response to the elders’ concerns raised at a four-day community meeting about the recruitment of the young men by the jihadist groups, who would give them guns plus enormous payments of \$30/day for single man and \$50/day for a married man. They were concerned for the elephants as they realised that the elephants make their area special, and could eventually contribute to tourist revenues. They also knew that the elephants were the focus of the project which was enabling them to take control and reverse the degradation in natural resources that is undermining their livelihoods.

These networks discovered the identities of those responsible for the poaching; retrieved the project’s stolen solar panels; undertook resource-protection activities in return for food; and saw themselves as project “animateurs”,



Working with a vigilance cell Credit The Wild Foundation

extending the understanding of resource management as a way to resolve conflict across the elephant range. No members of the vigilance networks joined the armed groups, while in another area of the elephant range beyond the project's current reach, relatively large numbers of young men joined up. They regarded working for the project as more 'noble', and there was a strong sense of pride in being able to provide for themselves and their families, as well as benefit their community.

These young men have proved invaluable in meeting an enormous challenge that at first glance seemed insurmountable. A broken dam caused the water to drain from a chain of major lakes. Both elephants and livestock require food in proximity to water, and as the pasture is exhausted close to the river Niger (through grazing and fire), herders move into the elephant range to find pasture within reach of the area's lakes and water-holes. The broken dam meant that herders from the river would concentrate in other areas, and particularly Lake Banzena. Banzena is the only source of water for elephants at the end of the dry season, and our experience from previous years suggests that such an influx of cattle would be likely to drink the lake dry before the end of the dry season leaving the elephants without water.

To prevent this move towards Banzena, our team suggested constructing a fire-break running parallel to the river to prevent the loss of pasture adjacent to the river from fire, so that these herders do not have to leave the river zone. No sooner was this suggested, than the young men in the wider Banzena area set to work and have created a 120km long fire-break.

The local people say they are able to do this because the project gave them the camels for natural resource protection, and helped them with grain when they most needed it. As one herder said, *"Everyone says thank you, as without this (the donation of grain) we would have died of hunger. May God protect you"*. We are now organising the river communities in fire-watching and fire-fighting to protect this pasture.

As a result of this community action, only six elephants have been killed. The challenge now is in rebuilding communities affected by the conflict, as families with members who joined the jihadists groups have fled, fearing retribution. Sustainable resource management may be a vehicle to help repair the rifts. It has not only improved the livelihoods of the local population (and the elephants) but has created a sense of achievement and built a platform of shared empowerment. But it requires the community to come together, and so community



Elephants migrating Credit C Ward Jnr

reconciliation will be an important new element of the project's process, providing a basis on which to rebuild trust and emphasize commonality.

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Protecting Native Fish in the face of Salmonid Invasions: What have we achieved? (EIDP041)

Two Darwin projects in Chile and the Falklands Islands (Projects 15-020 and EIDP041) have addressed from 2006 to 2012 the impact of invasive salmonids and the conservation of native fishes, a globally sensitive issue that demands urgent attention at different levels.

The main outputs of these two projects have included (1) an assessment of some of the main impacts of invasive salmonids on native fish biodiversity, (2) and investigation into the potential use of captive-breeding through Aquaculture as a way to conserve endangered native fishes, including the endangered galaxiid *Aplochiton* sp and (3) the development of a global online Atlas that should help inform and improve the management of invasive salmonids

in sensitive areas. The projects have also resulted in 8 peer reviewed publications (with 3 more currently under review), 3 book chapters and 10 dissemination articles.

These two Darwin projects provide insights into the Aichi targets (Convention on Biological Diversity, CBD) which set a timetable and tasks for CBD parties to be achieved by 2020. In particular, target 9 (strategic goal B: reducing the direct pressures on biodiversity and promote sustainable use) deals specifically with exotic species, and aims to prioritize critical cases, control or eradicate exotics, and prevent further introductions. As 2020 approaches, it is worth evaluating the impact that these Darwin projects may have had at local level, independently of the merit that scientific publications may have in contributing to a better understanding of biological invasions globally.

In the first place, these projects have provided international funding to examine the sustainability of salmon farming, and more specifically, the impact of exotic salmonids



Electro-fishing in the area of Lake Rupanco to examine the distribution of native galaxiids and exotic salmonids
Credit University of Los Lagos

on native biodiversity, a topic that would have been extremely difficult or impossible to fund solely with national resources. Salmon farming has made the country the second largest salmon world producer, and makes a major and decisive contribution to Chile's economy. Darwin funding has facilitated the advancement of knowledge on exotic impacts, in line with Aichi target 20 that invites governments to mobilize resources to implement the 2011-2020 strategic plan agreed in 2010 at Nagoya.

Secondly, the international network established by the Darwin Initiative in Chile and the Falklands Islands demonstrates the value of transnational cooperation and the merits of an integrative approach, where the viewpoints of different stakeholders are considered in order to tackle the complexities of managing exotic species that provide high societal benefits but than can also cause loss of biodiversity.

In this sense, the merit of workshops was demonstrated by the attendance of many different stakeholders, and represented an opportunity to disseminate and share the need to manage exotics, and to recruit young local students and volunteers to work on the projects.

Capacity and infrastructure built in Chile and the Falklands was also an important output of these projects and should also be acknowledged. In total, the projects directly supported 8 jobs and resulted in the training of over 30 students at undergraduate level and 12 students at post-graduate level including one PhD.

One frustrating aspect of the project refers to the slow and somewhat limited impact that the scientific studies generated during this work seem at times to have had on policy-makers, in a country where exotic salmonids are a highly valued commodity and where the need for economic growth often outweighs consideration of environmental impacts. An utilitarian approach that views natural resources solely by their immediate economic value works against the conservation of native fish, which do not grow large, provide no fishing, and have a low perceived value. This is something that CBD needs to monitor closely, if the objectives of the CBD are to be met in seven years.

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Bugs on the Brink! – Invertebrate conservation effort underway on St Helena. (19-029)

The clock of extinction looms large over much of St Helena's endemic wildlife. For more than 400 land invertebrate species the hands are set at about 10 seconds to midnight. Against this backdrop, a new invertebrate conservation team is assembling in the St Helena National Trust, with the help of Darwin Initiative funding. The team is supported by Buglife in the UK and comprises: an experienced UK entomologist, David Pryce, who will stay for two years as Project Coordinator; a visiting conservation and education specialist, Roger Key; and a local Saint (as St Helenians are known), Liza Fowler, who will spend three years as Education Officer. They will join forces with the St Helena Government's Nature Conservation Division to advance invertebrate conservation on island. Over the coming years, the efforts of this group will help make the difference between global extinction and survival for many species.

David, Roger and his wife, Rosy, arrived on

St Helena in February. Their first job was to familiarise themselves with St Helena's unique environment, a mixture of luxuriant cloud forest, arid terrain, pasture land and non-native woodlands. David said, '*Since arriving, the real high point (quite literally at times) has been exploring this ridiculously beautiful and rugged island, while getting to grips with its native invertebrates and associated threats and challenges – it's weevil-tastic!*'

Despite the threats facing so many invertebrates, there are some glimmers of hope. Following visits to remnants of native forest, Roger reported, 'where alien plant species have been cleared - and replaced with species of tree that nearly went extinct - we've found pretty strong populations of some very scarce species. If we keep up the momentum and good work, the future may not be quite as gloomy as we'd feared'.

The team have also been progressing on the education front, building relationships with the teachers and pupils of the primary and secondary schools. Liza said, '*last Thursday and Friday we all spend our time at Prince Andrew School, Thursday we had three classes of different age students, Friday an assembly and one class and we took them on site for some fieldwork, where they had a great*

time hitting vegetation with the equipment
– obviously one of the more active sampling methods! Enabling young people to appreciate and study their own environment is one of the foundations for conserving biodiversity, in the long term. Liza herself was one of the conservation apprentices trained on a parallel Darwin Initiative project, so the investment in local skills is paying off already.

In the coming months, the project will move up a gear with the arrival of Alan Gray, of the Centre for Ecology and Hydrology, Edinburgh. Alan will be studying insect pollination in the endemic gumwood woodland, to understand

better the restoration of this endangered habitat. Associated with this, local tree nursery staff will be learning how to improve the health of young trees.

So, the Darwin project team will have plenty to occupy it in 2013. It will also be able to assist ongoing conservation effort for that invertebrate flagship of the cloud forest – the Spiky Yellow Woodlouse – as well as offer technical support during the airport construction project.

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Conservation through poverty alleviation (19-013)

The Conservation through Poverty Alleviation project, led by the International Institute for Environment and Development (IIED), aims to build the capacity of the Ugandan Poverty and Conservation Learning Group (U-PCLG) in policy advocacy. The project comprises two stages starting with research to better understand the livelihood and wellbeing needs

of local communities as drivers of resource use; with Bwindi Impenetrable National Park as the case study. U-PCLG will then be trained in policy advocacy, and using the research findings, advocate for Integrated Conservation and Development (ICD) to be more effective in poverty alleviation.

Following our project inception workshop in July 2012, the lead Ugandan research partner, the Institute of Tropical Forest Conservation (ITFC) designed and started the fieldwork. On 12th March 2013, ITFC hosted a one-day workshop to present the initial research findings



Consultant Dr Michelle Wieland explains how to use the database tool. Credit A Kirby

and develop the research outputs with the project stakeholders. There was a broad range of participants including the Chief Warden and Community Conservation Warden of Bwindi, representatives from conservation NGOs, international researchers and local journalists.

The workshop started with presentations on the research findings to date that included livelihood and wellbeing needs of resource users, life history stories of key resource users and perceptions of natural resource governance at Bwindi by local communities. Following a Q&A session, there were three group sessions – barriers and enablers of conservation through poverty alleviation, designing an ICD project plan to achieve targets of good governance and establish a theory of change on ICD success. In addition, throughout the day participants were encouraged to share knowledge and experiences and help design the primary research output – new ICD guidelines for linking protected area conservation with poverty alleviation.

A key part of the workshop was the debut of one of the project's legacies: a new tool for improving ICD effectiveness in conservation through poverty alleviation. The tool is a

database of livelihood and wellbeing needs of resource users within local communities neighbouring Bwindi. Workshop participants were given an interactive demonstration where they were shown the various information components of the database and then developed their own 'query' on resource use, which quickly produced a simple table of the data. Dr Robert Bitariho (ITFC Director) then led a discussion on the long-term use of the tool, starting with the ITFC vision on how the tool can help improve ICD at Bwindi and the possibilities for its use in other national parks in Uganda. There was much interest in the tool, so much that ITFC agreed to hold a focus group meeting to discuss and agree ownership, maintenance and long-term use of the tool after IIED's Darwin project.

As the workshop came to a close, the journalist interviewed workshop participants resulting in a broadcast on the local KBS radio station that evening and an article in the national newspaper, the Daily Monitor the next day. All in all, a great result from a fantastic day!

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“The data is highly useful for us in reviewing and improving our plans/policies. It helps us to see where interventions have had an impact, and where we can improve.”

The Bwindi and Mgahinga Conservation Trust

“Information in the database is already being listened to and used. It helps the Uganda Wildlife Authority answer important questions about resource use – who are using resources, who is interested in resource use and, if they are not interested, why are they not interested?”

Community Conservation Warden of Bwindi

“The database is vital for the Uganda Wildlife Authority. It complements our Ranger Based Monitoring Programme covering areas not covered by the programme, and the integration of the two sets of information is important.”

Chief Warden of Bwindi



Dr Nikky Thomas outlines to the Indian media the role of scientific research in promoting biodiversity cons in the Old World Tropics Credit Harrison Institute

Enhancing taxonomic capacity to underpin tropical biodiversity conservation (SE Asia) (18-002)

On 19 February, 2013, Dr Paul Bates of the Harrison Institute helped launch Bat Conservation Africa. As the name suggests, this network is dedicated to the study and conservation of bats in Africa and was the outcome of a week-long summit in Naivasha, Kenya organised by Bat Conservation International (USA) and attended by 30 African and international delegates.

At the summit, representatives from 19 African countries drew on the experiences of others from the United States, Latin America, Europe and Australia in helping design the new network. The role of the Darwin project in Southeast Asia featured extensively, acting as a working example of how to promote dialogue, capacity building, and international collaboration

at a regional level.

This was not the first time that the project has acted a role model. In April, 2012, Dr Nikky Thomas of the Harrison Institute together with Darwin trainees from Lao PDR and Thailand undertook the first of a series of planned workshops in the Indian Subcontinent to promote networking, training and research. Thanks to these activities, made possible by Darwin support, we now have a taxonomic network that stretches from Southeast Asia to Southern Asia to Sub-Saharan Africa – it is truly a network of the Old World tropics.

Sadly, the first phase of the current project in Southeast Asia is now drawing to a close. However, we feel that it has achieved all its aims and more. Initially involving just four PhD students from Thailand, Lao PDR and Cambodia, these have been joined by a further five MSc students from additional countries that include Bhutan and Zambia. Initially concentrating on bats and birds, new subjects areas include rodents and amphibians and in addition to taxonomy per se cover other aspects

such as disease risk in frogs in peninsular Thailand and threats to squirrels from hunting in Lao PDR. Together with the Prince of Songkla University Vice President, Dr Chutamas Satasook and her colleagues from Thailand and supported by the University of Ulm, Germany, the project hosted the first international bird conference for Southeast Asia (November, 2012).

Over and above training a new cadre of young, committed, in-country taxonomists, many new discoveries have been made. On the basis of his research of flying squirrels in the markets of Lao PDR, Darwin student, Daosavanh Sanamxay, has just submitted a paper on a new species of one of the world's rarest

squirrel genera, whilst new bat species have been described, or are being described, from Myanmar, Cambodia, Thailand and Vietnam. There have been taxonomic reviews of Thai squirrels and peninsular Thai-Malay murid rodents. A project on the frogs of the Tarutao Islands promises exciting results. It seems that every week, the team finds something new, something interesting, and something worthy of publication. We would like to take this opportunity to thank Darwin Initiative for making this extensive, in-country taxonomic network a reality and for giving taxonomy a chance to flourish in the Old World tropics where biodiversity is at its richest but least understood.

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Payment for environmental services scheme in Uganda improves collaboration among stakeholders and invigorates land ownership verification (18-012)

A payments for environmental services (PES) scheme in western Uganda, which compensates people for conserving and restoring chimpanzee corridor forests is managing to reach small-scale private forest owners and is overcoming barriers of informal land ownership and boundaries.

413 forest owners have worked with local leaders and project staff to map their forests. Village local leaders have supported forest owners to ensure that ownership status of their land is verified. This has been done through consultation with neighbouring community members. The project has connected people of different origins, ranging from peasants and farmers to religious leaders and politicians. This work has also helped define the size of forest areas and type of land ownership.

The PES scheme participants fall predominantly under customary landownership which means,

in Uganda's case, a lack of legal documentation of ownership but one that is entrenched in traditional ownership norms.

The results of the mapping show that 54% of the Private Forest Owners (PFOs) under the scheme have forests whose size is ≤ 1.5 ha and only 4% of those under the scheme have forest that are ≥ 16 ha.

Forest management plans can help ensure



Tracking forest Boundaries with PFOs
Credit P Hatanga



PFO shows forest boundary Credit Jovan Baryamujura

that PFOs can meet their family's needs for wood products while maintaining the integrity of the forest. Uganda's government guidelines recommend these plans for landowners with ≥ 10 ha. This project has developed simplified management plans that adapt these guidelines to the majority of the small landowners in the scheme. These guides have positively demonstrated enthusiasm of the landowners to both conserve their forests and plant trees to restore the forest in exchange for a payment. But the experience is showing that there is a need to support PFOs in developing small-scale forest-based enterprises as a complement to the PES scheme.

The recently approved Darwin Post-Project expects to address this gap.

The Darwin Initiative has supported the Chimpanzee Sanctuary & Wildlife Conservation Trust (CSWCT), a Ugandan NGO, and

the International Institute for Environment and Development (IIED), a policy research organization, since April 2010 to develop and pilot this PES scheme. The initiative aims to combat the rapid loss of forests and biodiversity in the Murchison-Semliki landscape.

More on the project can be found here www.iied.org/paying-local-communities-for-ecosystem-services-chimpanzee-conservation-corridor

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More about the scheme

The Darwin Initiative has supported the Chimpanzee Sanctuary & Wildlife Conservation Trust (CSWCT), a Ugandan NGO, and the International Institute for Environment and Development (IIED), a policy research organization since April 2010 to develop and pilot this PES scheme.

The project is set in the Murchison–Semliki landscape, part of the Albertine Rift region in western Uganda. The high biodiversity region contains large forest reserves such as the Budongo and Bugoma Central Forest Reserves as well as many privately-owned corridor forests. These corridor forests are rapidly being converted into subsistence and small-scale commercial agriculture. In addition, forests are being severely degraded through increasing indiscriminate logging, harvesting of fuel wood and sub-canopy agriculture.

The pilot PES scheme has been designed to try and combat these problems. It aims to establish an effective, equitable and financially sustainable payment conservation strategy for local landholders who are conserving and restoring forest habitats to protect chimpanzee populations and other species and habitats as well as to demonstrate the effectiveness of PES.

Starting-up the Blue Forests Project in Northwest Madagascar (19-016)

The Ambaro and Ambanja Bays in northwest Madagascar are losing their mangroves at an alarming rate: A national analysis of mangrove deforestation done by Blue Ventures (BV) showed that within these vast bays, over 5,600 hectares, or 18.7%, of mangroves were lost between 2000 and 2010 alone. BV's Blue Forests team carried out several research trips to the area in 2012 to research the drivers of deforestation and measure the mangrove's carbon stocks. The clear need for more work here led BV to set up a permanent office in Ambanja. The office has been operational since January 2013 and is staffed by Malagasy, French, Zimbabwean and American scientists specializing in geospatial analysis, carbon accounting, socioeconomics, community management and agronomy. Together with local communities, BV is working to use carbon finance to support the conservation and sustainable use of these mangroves.

So far, socioeconomic studies show that the greatest threats to mangroves in Ambaro-

Ambanja Bay are illegal charcoal production and logging for building houses and fences. Satellite imagery and field observations show a concentration of logging in three communes that straddle the peninsular between the two bays. In the past twenty years, deforestation has fragmented what had been a continuous mangrove corridor joining the bays. In early 2000, management of the mangrove forests in these communes was delegated to community associations, called Communautés Locales de Base (CLB). Despite their desire to protect mangroves, the CLBs lack the means to protect their mangroves. BV will support both them and the local communities, building their capacity and putting local people at the center of mangrove management.

BV will provide technical help to support activities defined by each CLB according to their needs. Activities will include sustainable forest management, sustainable production of charcoal, formalizing traditional laws (dina) for mangrove protection, developing alternative livelihoods to charcoal and timber, mangrove restoration, and education programs.

In February, BV consulted the local authorities and people to present the project, and to assess the state of mangrove forests and community dependency on them. To fully

CLB representatives and local authorities at the Blue Forests initial concertation workshop
Credit B Zafindrasilivonona



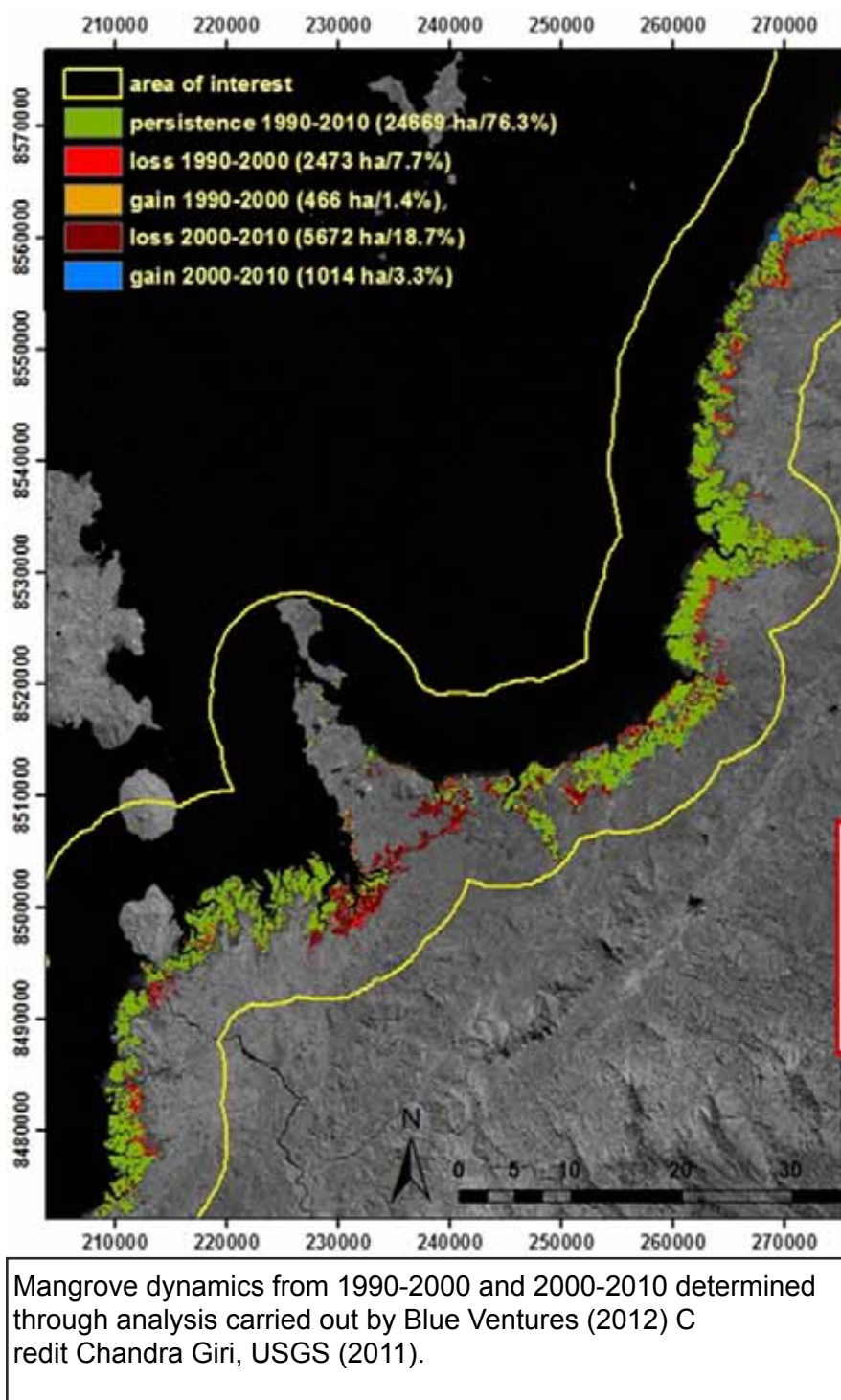
understand the local contexts, the team visited traditional authorities in each discrete community, or fokontany. This revealed just how diverse livelihoods are, ranging from cocoa, coffee and vanilla-based commercial or subsistence agriculture to purely fisheries or mangrove charcoal and timber production. Each fokontany discussed what opportunities the project could bring to them. These discussions allowed the stakeholders to draw up a roadmap for activities at the CLB and fokontany levels. In April, an analysis of production systems will provide a detailed picture of mangrove exploitation and its links with agricultural and fishing. This study, building on both the participatory appraisals and household surveys, will help identify realistic alternative livelihoods and track changes in socioeconomic conditions.

Parallel to community engagement, BV is building on our previous carbon measurements and deforestation analysis to develop a mangrove REDD+ project using the Voluntary Carbon Standard (VCS) VM0009 methodology. Given the time taken to develop VCS projects, the team is exploring other PES options, such as eco-tourism and the certification of the mangrove crab

fishery as sustainable, which could allow for local communities to benefit from the close proximity of Nosy Be, Madagascar's largest tourist destination.

As 2013 marches on, the project is making headway on many fronts, working hand-in-hand with coastal people to improve livelihoods while safeguarding the rich biodiversity and ecosystem goods and services of mangrove wetlands.

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The Darwin Initiative aims to promote biodiversity conservation and sustainable use of resources around the world including the UK's Overseas Territories. The Darwin Initiative projects work with local partners to help countries rich in biodiversity but poor in resources to fulfil their commitments under the CBD, CMS and CITES. The initiative is funded and administered by the UK Government's Department for Environment Food and Rural Affairs (Defra). Since 1992, the Darwin Initiative has committed over £88million to over 750 projects in over 150 countries.

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For more information on the Darwin Initiative see <http://darwin.defra.gov.uk>

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