

Liberian forest elephants Credit: FFI FDA ZSL

# March 2015 Newsletter



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The Darwin Initiative supports developing countries to conserve biodiversity and reduce poverty. The Darwin Initiative (funded by Defra, DFID and FCO), provides grants for projects working in developing countries and UK Overseas Territories (OTs).

**Projects support:**

- the Convention on Biological Diversity (CBD)
- the Nagoya Protocol on Access and Benefit-Sharing (ABS)
- the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)
- the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES)

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An old man of the Aweer community showing how they used to hunt wild animals using bows and arrows, Kenya.  
Credit: J. Bett

# Newsletter contacts

## **The Darwin Initiative Secretariat (Defra)**

The Darwin Secretariat is based in Defra and includes Clare Hamilton and Sally Cunningham.

If you have any general queries about how the Darwin Initiative operates please e-mail us at

[darwin@defra.gsi.gov.uk](mailto:darwin@defra.gsi.gov.uk)

For any queries on project applications or existing projects please contact our Darwin Administrators (LTS International) at

[darwin-applications@ltsi.co.uk](mailto:darwin-applications@ltsi.co.uk) or [darwin-projects@ltsi.co.uk](mailto:darwin-projects@ltsi.co.uk)

This newsletter is produced quarterly. To include an article on your project please contact us at

[darwin-newsletter@ltsi.co.uk](mailto:darwin-newsletter@ltsi.co.uk)





# Publicity and Information about the Darwin Initiative

For more information on the Darwin Initiative please visit:

[www.gov.uk/government/groups/the-darwininitiative](http://www.gov.uk/government/groups/the-darwininitiative)

For further details about current and completed Darwin Initiative projects, including those featured in this newsletter, please visit:

[www.darwininitiative.org.uk](http://www.darwininitiative.org.uk)

**We've recently launched a Darwin blog. This includes news and thoughts on issues being tackled by the Darwin Initiative - both at the project and programme level. We're also keen to share other Darwin project blogs. You can read it here:**

<https://darwininitiativeuk.wordpress.com/>

## **Publicity and referencing Darwin Initiative**

**We kindly remind project leaders that if they are publicising their work then it is important that they make every effort to mention Darwin funding. This is important as it helps us to ensure the Darwin Initiative retains a high profile and helps us to secure continued Government funding.**

Tanzania, Chaumes  
cubs. Credit: S. Durant

# A Word from Darwin

A year on from the London Conference on Illegal Wildlife Trade, the illegal wildlife trade remains a hot topic across the globe. With the follow on conference in Kasane rapidly approaching, this edition of the newsletter aims to highlight the contribution of Darwin projects in the field of unsustainable trade.

Following the London conference, the Illegal Wildlife Trade Challenge Fund was established with UK Government funding, committing £10 million over 4 years. This fund aims to support projects around the world which focus on developing sustainable livelihoods for communities affected by the illegal wildlife trade, strengthening law enforcement, and reducing demand for the products of the illegal wildlife trade. Whilst the IWT Challenge Fund remains separate to the Darwin Initiative, this edition of the newsletter demonstrates the complimentary contribution of Darwin projects in this important area.

Contributions this month demonstrate the many facets of the biodiversity trade with some articles documenting efforts to reducing poaching and illegal timber extraction driven by national and international demand. Others examine how FairWild certification is helping communities to secure market access and improve the sustainability of natural resources. Also at the local scale, consideration is given to improving the sustainability of bushmeat hunting through establishing a community hunting zone, and a range of approaches to combat illegal and unsustainable fishing practices. The final articles in this edition are broader in scope, examining strategies to identify sites of ecological importance and examining considerations relating to the equity of national parks.



Agroforestry in  
Madagascar. Credit:  
RBG Kew

# Poverty and Biodiversity: Thematic Review

In January this year we launched a new evaluation to look into the evidence of how the Darwin Initiative is contributing to poverty alleviation. The review is expected to look at what progress has been made and demonstrate how projects are contributing to both biodiversity conservation and poverty alleviation (see [Learning Note](#) for more about this).

We will be using a variety of methods to generate evidence and learning on how Darwin projects are making progress and where we can learn lessons. Our hope is this work will contribute to the growing knowledge base of how to tackle the dual goals of poverty alleviation and biodiversity conservation.

We would particularly like to hear from people who have any case studies or evidence that you think might be relevant. Send your ideas to [Jami-Dixon@ltsi.co.uk](mailto:Jami-Dixon@ltsi.co.uk). You can keep up to date with the review in our [blog here](#) or follow Jami on twitter [@LTSI Jami](#).

This month we're struggling with the issue of what constitutes good evidence. With over 900 Darwin projects since 1992 we're drowning in reports and materials. But generating a coherent picture of the contribution these projects have made to poverty is a hard task.

Evidence and reporting is a key issue that we will be working with projects this year to improve - how can we best present evidence that our projects are having a positive impact. You will see a series of campaigns in the coming months to help our projects develop coherent monitoring and evaluation plans that support adaptive management of projects to the best effect.

# Support for the border force frontline in combatting illegal trade in wildlife

Tanzania holds an estimated 25% of the world's known remaining lions, 22% of its elephants and 9% of its cheetah, making it a target for illegal wildlife trade, especially elephant ivory. While illegal trade in elephants and rhinos is relatively well-documented, illegal trade in big cats is poorly known.

The Darwin funded CUT (Conflict, ensuring sustainable Use and reducing illegal Trade) large carnivore management plan is working to combat the accelerating international illegal trade in wildlife. Whilst much attention has been paid to the role of wildlife rangers and wardens in protected areas, much less has been given to those combatting the trade at another important front line - the exit ports in source countries. In Tanzania these ports act as key transit points for the smuggling of illegal wildlife products, and so custom and security officers are key to the interception of these products. It is perhaps surprising that these men and women have been

provided with little or no training in combatting illegal wildlife trade.

At the end of last year, our project held two training workshops in Dar es Salaam, providing training for 71 customs, security and game officers working at two of the most important exit ports in Tanzania. We covered a range of subjects, including the impact and extent of illegal wildlife trade, smuggling techniques, CITES, reporting protocols and the role of Interpol in intercepting international crime networks. The afternoon was spent in a practical session, where trainees were given hands-on experience in identifying fake and real products from large mammals. The most challenging product to transport was a large elephant tusk - which required us to have an armed guard present at all times. However, it provided a rare opportunity for trainees to familiarise themselves with real ivory, and the hands-on experience in the workshops was invaluable.



The illegal wildlife trade is linked to crime networks and international terrorism, and has catastrophic impacts on local people. For Tanzania, this trade represents the theft of valuable natural capital from vulnerable communities to satisfy the demand of the wealthy in distant economies. Living wildlife in Tanzania supports a growing ecotourism sector that now leads in generating foreign revenue and taxes that support Tanzania's people, while dead wildlife only generates a small fee for the poacher. We are hopeful that our workshop process can be used across Africa to provide vital training for customs officers to help combat this criminal theft of natural resources.

For more information on project 19-006 [click here](#) or email Sarah Durant at [s.durant@ucl.ac.uk](mailto:s.durant@ucl.ac.uk)



Tanzania workshop. Credit: TRAFFIC



# Protecting Mali's Desert Elephants: Two Steps Forward, One Step Back

The Mali Elephant Project has been working to manage human-elephant coexistence and ensure that elephants become an integral part of natural resource management and support local livelihoods in the Gourma region of Mali. Increasing human pressure throughout the migratory range of the 550 Mali elephants has heightened the potential for human-elephant conflict at the same time as degradation has impoverished livelihoods and reduced the resilience of the ecosystem to cope. The unpredictable security situation in the region compounds these difficulties.

During 2014 the project supported community leaders to convene meetings focused on community solidarity to combat insecurity in the region, identify bandits, and disarm and reintegrate former fighters into their communities. Encouraged by this local involvement, the army strategically deployed additional forces and, since September 2014, the security situation has improved in the centre and south of Gourma with fewer attacks and thefts. People have been travelling more freely and markets have reopened.

However, it is the dry season and the elephants are particularly vulnerable as they gather towards

the remote north of their range, frequenting the small lakes that still contain water. From the 27th December and into the first 3 weeks of January, after 7 months of zero poaching, the elephants were targeted by an external well-organised trafficking network and 19 elephants were lost.

The project responded by mobilising all its assets and networks to deal with the escalating situation, however underpinning this situation is the ongoing insecurity in the Gourma. Life cannot return to normal until people can live without fear of attack and robbery. As the community meetings show, there is enormous willingness among the local population to do what they can. They have a substantial amount of information, but require safety from "retribution" killings in order to be able to deliver it. The project has responded by hastening the completion of an integrated and active three-pronged strategy that combines the military, government foresters and the community, and so far there have been no more killings.

For information on project 19-010 [click here](#) or contact Susan Canney at [susan.canney@zoo.ox.ac.uk](mailto:susan.canney@zoo.ox.ac.uk)





## Local Initiatives to address illegal or unsustainable trade and its drivers

The Boni-Dodori ecosystem in Kenya harbours rare and endemic species and the area's indigenous hardwoods and animals attract poachers from outside the Aweer community.

Illegal cutting of indigenous hardwoods is driven by high demand in the construction trade and the boatbuilding industry, with the most prized species including Mwangati (*Terminalia spinosa*); Muhuhu (*Brachylaena huillensis*); Mbambakofi (*Alfzelia quanzensis*), and Mpingo, or zebra wood (*Dalbergia melanoxylon*). Much of the illegally-harvested wood is taken to bigger towns and cities and occasionally shipped as far as the Middle East.

The primary objective of this project, lead by WWF, to assist the government and the local communities to reduce the illegal extraction of natural resources through logging and hunting, and to enhance security for local people in their areas of jurisdiction. The project supports community scouts in biodiversity monitoring and reporting, a programme run by its local partner –

Northern Rangelands Trust Coast.

Wildlife and forest areas are monitored on a daily basis to obtain reliable information about the location, movement, abundance and trends of wildlife populations and threat types in a given area. Illegal logging activities are reported to the mandated forestry agency and in some cases the loggers are arrested.

This community scout programme has recorded considerable achievement in terms of reporting of illegal loggers, animal sightings and poachers, information on wounded animals, protecting threatened tree species, controlling bush-fires, reporting human-wildlife conflict and collecting wildlife and marine data. Wildlife and ecosystem monitoring is a very important conservation activity that has contributed to a reduction in illegal and unsustainable trade and its drivers.

For more information on project 20-011 [click here](#) or contact Kiunga Kareko at [Kkareko@wwfesarpo.org](mailto:Kkareko@wwfesarpo.org)





## Ibis Rice

The forests and wetlands of northern Cambodia and the Tonle Sap Biosphere Reserve are of exceptional importance for biodiversity conservation, supporting over 30 Globally Threatened species, including 8 listed as Critically Endangered, notably the Giant Ibis (*Thaumatibis gigantea*) and White-Shouldered Ibis (*Pseudibis davisoni*). Local communities are amongst the poorest in Cambodia, and are dependent upon the forest and land resources for their livelihoods. Farmers primarily rely on subsistence rice farming, creating direct competition with wildlife for the use of the surrounding habitat.

From 2013 the Wildlife Conservation Society (WCS), with the support of the Darwin Initiative, assisted Sansom Mlup Prey (SMP), a local NGO, to implement the payment for environmental services (PES) scheme ‘Ibis Rice’ to engage local people in conservation whilst meeting their aspirations for development. Ibis Rice provides premium prices for Jasmine rice (Pka Malis) products if households limit field expansion to within agreed land use plans. This project rapidly grew from 141 families across 7 villages in 2011, to 339 families across 11 villages in 2014.

Compliance to the project is verified by a locally elected Village Marketing Network committee, supported by SMP and WCS, to enhance community-based management and capacity-building. Ibis Rice not only contributes to an increase in the participating individual household livelihoods, but also benefits the wider communities by providing rice loans for poor families and distributing Jasmine rice seeds to new farmers who wish to join the scheme.

With the help of the Darwin Initiative, Ibis Rice is currently still buying rice from villagers from their 2014-15 harvest, where 450,000 kilos of rice have been bought from 313 families across 13 villages. The long term goal is to expand the project to 15 villages to further increase the well-being of local communities whilst protecting key endangered species.

For more information on Project 20014 [click here](#) or contact Ross Sinclair at [rsinclair@wcs.org](mailto:rsinclair@wcs.org)



The dried fruit de-stoning and sorting machines are given a ritual blessing in India.  
Credit: I. Bride

## The first FairWild certified species in all of India

FairTrade has demonstrated how certification can provide a means of securing market access and adding value to natural resources. It also offers potential for encouraging wider community ownership, building capacity, ensuring a more equitable distribution of benefits, and providing an educational tool for developing understandings of the nature, value and proper utilisation of these resources. FairWild certification is rigorous, providing specific guidance regarding the sustainability of wild harvesting and trade.

This Darwin-funded project is working with rural communities in the Western Ghats of India to demonstrate how such certification schemes can facilitate positive conservation and livelihoods outcomes. These communities of Mahadev Koli tribal people living in the Bhimashankar Wildlife Sanctuary in the North Western Ghats, and marginal farmers in the Sangameshwar block of Ratnagiri District, were lacking sustainable harvesting skills and market access, limiting their range of economic opportunities.

The project carried out resource assessments of

two endemic species, *T. bellirica* (primarily within sacred groves in the south), and of *T. chebula* (in large wild groves in the north), which are ingredients of Triphala, one of the most important Ayurvedic preparations. Partners engaged in a careful process of consultation and discussion with local stakeholders, designed local access and benefit-sharing agreements, and helped set up organisations to oversee the implementation of these agreements and equipment training schemes.

The use of the FairWild certification process to build on collaboration between stakeholders and create a complete and robust supply chain, offers considerable promise for the conservation of these tree species, their habitats, and the associated biological diversity. The first FairWild labelled Triphala products are expected to be marketed by Pukka in the UK later in 2015.

For more information on project 20-016 [click here](#) or contact Douglas Macmillan at [d.c.macmillan@kent.ac.uk](mailto:d.c.macmillan@kent.ac.uk)



Local collector sustainable harvest of *Alpinia malaccensis* in Vietnam. Credit: N. Tap/ TRAFFIC

## The FairWild approach in Vietnam is helping communities and conservation

While poaching of the world's iconic large mammals has inevitably hit the headlines, it is by no means the only issue of importance regarding wildlife trade. How many readers would identify the trade in wild plants as one of crucial importance? Yet billions of people worldwide rely directly on wild-harvested plants as their primary source of health care and well-being.

This TRAFFIC-led Darwin-funded project will be implementing a project in Bac Kan province in northern Vietnam to improve the management of wild plant resources and enhance the benefits derived from them for low-income, rural communities. In the project's four focal sites, wild medicinal plant populations have been declining for the last two decades as a direct result of over-harvesting. The trade is often driven by illegal export to China and the majority of collectors are women, belonging to various ethnic minority groups including the Tay, Dao, H'mong, Nhung and Hoa.

The ambitions of the project are to improve the income for at least a thousand of the poorest, whilst improving the sustainability of plant

resources through implementation of the FairWild Standard. This Standard was developed by TRAFFIC, WWF and other FairWild Foundation partners to ensure those collecting wild plant ingredients harvest their produce sustainably and receive a premium price for their efforts. It is a win-win situation for producers, traders, retailers and buyers.

The project in Viet Nam will be implemented in the buffer zones of the Nam Xuan Lac Species and Habitat Conservation Area, Kim Hy Nature Reserve, Ba Be National Park and Ngan Son district of Bac Kan province. It will provide tailored support to implement sustainable production of selected medicinal plants species, support the provision of added-value mechanisms, ensuring the quality of products while assisting in increased income-generation for local collectors through improved market access and support to certification.

For more information on project 22-010 contact James Compton at [james.compton@traffic.org](mailto:james.compton@traffic.org)



## Rural poverty challenges in central Cameroon: A Panacea, Or Pandora's Box?

Finding 'win-wins' for people and wildlife in rural poor situations isn't easy. In fact, it's downright difficult. When one tries to combine the conservation of endangered species in places where obtaining enough food to feed the family is a challenge, then normally something has to give.

The situation in central Cameroon, around the Dja Biosphere Reserve (DBR), is typical of the challenges facing rural people living in poverty. Each year hunters have to travel further to find animals to provide the protein they need – including into protected areas. Building upon many years of engagement with the communities living around the DBR, a community hunting zone is being set up. This zone is based on legalised hunting, to agreed quota levels on non-endangered species. It will also support the protection of wildlife in the DBR, by enabling legally-hunted animals to be sold instead of endangered animals, such as gorillas and chimpanzees being taken from both the Reserve and the surrounds. In this way, sustainable trade is being developed, allowing poor people to move out of poverty.

Yet significant challenges remain; the number of non-endangered animals that can be taken, in the community hunting zone, will not be sufficient to address the protein requirements of local people. As part of the on-going engagement and support process, the local people have identified two potential solutions: firstly to generate more cash in order to pay for goods; by increasing the production of cocoa beans that can be grown and sold locally. Secondly – in a ground-breaking decision to move away from hunting – to establish a fish farm that could provide animal protein for local consumption, as well as much needed revenue.

The next major hurdle to overcome is to find the funds to support the people to make the changes they'd like to see happen. No small task, but crucial if we are to build on the gains we have already made.

For more information on project 20-007 [click here](#) or contact Neil Maddison at [nmaddison@bristolzoo.org.uk](mailto:nmaddison@bristolzoo.org.uk)



A woman camps on the Barren Isles, where fishers from all over the west coast still free dive for sea cucumbers in Madagascar. Credit: G. Cripps

## Confronting illegal fishing practices in Madagascar

Until recently, traditional fishers working in the newly-formed Barren Isles Marine Protected Area (MPA) in Madagascar have had little recourse to face widespread illegal harvesting of sea cucumbers. In spite of both local and national laws forbidding the practice, illegal bottle diving remains pervasive on the Barren Isles reefs. Driven by demand in China, where sea cucumbers are considered a delicacy, bottle diving has wiped out the sea cucumber fisheries all along the west coast of Madagascar.

Using unsafe scuba equipment, these bottle divers compete directly with fishers who free dive, depleting populations of sea cucumbers which play an important role in fragile coral reef ecosystems, at unprecedented rates. Decompression sickness abounds, and every year divers are paralyzed, or even die, trying to satisfy the unquenchable demand.

As part of this project, the Government of Madagascar has agreed to collaborate with traditional fishers to set up a system of community-based surveillance of illegal fishing within the MPA. The project aims to

put information technologies in the hands of traditional fishers, giving them the power to record illegal fishing activities in real time. The project harnesses the needs of both sets of stakeholders; in order to address the challenges of illegal sea cucumber harvesting, the state needs better access and information about rural coastal areas and concrete evidence of illegal activities. In turn, fishers need to back locally agreed upon fishery management measures with state support to combat the well-entrenched industry.

The project is an innovative example of establishing a direct link between traditional fishers and national authorities. The model has potential to transform sustainable management of small-scale fisheries throughout Madagascar, bringing transparency and accountability to the fight against illegal sea cucumber harvesting within marine protected areas.

For more information on project 21011 [click here](#) or contact Alasdair Harris at [al@blueventures.org](mailto:al@blueventures.org)

Explosives used in blast fishing along the northern Pacific Coast of Nicaragua. Credit: J. Torres

## Reducing unsustainable fishing practices in Central America

This project has helped to restrict the spread of destructive blast fishing into the southern Pacific coast through targeted media campaigns and community-level education efforts. It is motivated by a shared desire to improve the sustainability of local fisheries and ensure community benefits from near-shore marine resources.

Artisanal fishers and Government authorities have improved their understanding of the impacts of blast fishing, as well as other destructive practices, such as bottom trawling, and derelict gear. Many were able to observe first-hand the effects of these destructive practices during scuba diving tours organized by FUNDENIC.

Similar negative ecological, economic and social impacts have been seen across the region from the presence of industrial bottom trawlers, gill nets and other fishing practices.

With the support of project partners, Fauna and Flora International and CoopeSolidar R.L., fishers in Cabuya, Costa Rica have designed a plan for a community-managed marine area, which explicitly restricts destructive fishing practices within its boundaries. Their model represents a novel approach to marine

conservation and responsible artisanal fishing and has struck a chord with the new Government, which is rethinking the role of communities in the governance and management of marine protected areas.

In Honduras, through the support of project partner LARECOTURH, the artisanal fishing association APROCUS has become a leading voice amongst coastal fishing communities, helping to reduce unsustainable fishing in the Cuero y Salado Wildlife Refuge. APROCUS is made up of local fishers who have preferential fishing access within the Refuge and, through the project, have improved their capacity to support the management of the Refuge, such as through participatory surveillance of illegal fishing practices, monitoring of fisheries and participation in management bodies. Through APROCUS and with the support of the project, fishers are now registered with both fishing licenses and ID cards, improving the ability of enforcement officials to prosecute illegal fishing within the Refuge.

For more information on project 19017 [click here](#) or contact Robert Bensted-Smith at [robert.bensted-smith@fauna-flora.org](mailto:robert.bensted-smith@fauna-flora.org)



ZSL Philippines Team members during a habitat survey, Santa Ana Falls, Gattaran. Credit: R. Morgia

## Eels – A flagship species for conservation in the Philippines

Eel farming - responsible for over 90% of all anguillid production worldwide - is reliant on growing out wild-caught juvenile “glass eels”. Until recently, harvest, farming and trade focused on temperate species such as the European eel (*Anguilla anguilla*), but over the past 30 years, declines in juvenile recruitment, continental populations and adult escapement have meant that catches have declined. In order to meet the continuing demand, fisheries for other anguillids have increased, exploiting tropical species such as *A. bicolor*. This is a risky strategy as these species are less-well understood and over-exploitation, in concert with other threats, could be hugely damaging to them, and other species in freshwater.

In the past five years, the Philippines has become an important source of anguillids and despite banning the export of eels  $\leq 15\text{cm}$ , there have been concerns that large quantities of glass eels continue to be illegally exported

from the country. In response this project aims to develop complementary management at the local, national and international levels for eel conservation, catch and trade. As the Cagayan Valley has historically been the focus of anguillid exploitation this is the regional focus of the project.

The team are conducting habitat, fisheries and socio-economic surveys, gathering information from fisher communities and engaging them in relation to the aims of the project and future options for fisheries management and associated national trade. A pilot study has also been initiated, to determine the feasibility of small-scale eel farming as a way of ensuring any financial benefits of such developments stay within the communities.

For more information on project 21-020 [click here](#) or contact Matthew Gollock at [matthew.gollock@zsl.org](mailto:matthew.gollock@zsl.org)

Indonesian Ministry of Fisheries personnel display confiscated manta ray gills at their offices in Negara, Jembrana, Bali. Credit: P. Hilton/ WCS



## Protecting manta rays and alleviating poverty in Indonesia

Indonesia, the world's largest shark fishery, is of critical importance for the conservation of sharks and rays, including several globally threatened elasmobranch species. This includes manta rays, which are highly valuable for the Indonesia marine tourism industry, but which are also caught to supply gill plates that are used in some new forms of Chinese medicine.

In response, this Wildlife Conservation Society-led project is supporting the Government of Indonesia to develop a regulatory framework for CITES-listed shark and ray species, undertake enforcement against the trade of these species, and support specialised shark and ray fishers to transition to other viable sustainable livelihoods.

Indonesia is a world leader in efforts to enhance the overall level of protection of threatened shark and ray species. In early 2014, a ban on the hunting and trade of manta rays was introduced, an unprecedented step, making Indonesia the largest manta ray sanctuary in the world. The economic argument for protection is strong: one manta ray has been valued at \$1 million over its lifetime from tourism in Indonesia, compared to

only \$500 if caught for trade.

Following the manta ban, Wildlife Crime Units began to focus on the manta trade and assisted Indonesian Authorities with successful raid of 6 key traders, resulting in the confiscation of over 130kg of manta gill plates and 550kg of manta bones. In 2015 two traders were successfully prosecuted, representing Indonesia's first law enforcement action under the new manta protection regulation. Field monitoring locations also suggests that fishers are finding it more difficult to sell manta and devil ray products — a trend that could lead fishers away from targeting mantas.

This project will continue to monitor the effects of enforcement actions on fishing and the populations of threatened species that the new regulations protect, and assist with identification of key traders and their transition to sustainable fisheries or alternative livelihoods.

For more information on project 22-008 contact Tom Clements at [tclements@wcs.org](mailto:tclements@wcs.org)





# Galapagos Marine Invasive Species: Prevention, Detection and Management


Galapagos is a UNESCO world heritage site, harbouring unique biological communities with a high incidence of endemic species. In recent years, due to the rapid growth of tourism, maritime traffic and urban development, the sustainability of the archipelago and its unique ecosystems is at risk. Associated increases in national and international maritime traffic, has resulted in the number of introduced terrestrial and marine species increasing dramatically. Invasive species are considered as the second most important cause for biodiversity loss by the IUCN. While their impacts have been studied extensively in the terrestrial environment, and promising quarantine protocols are now in place, few data is available for the marine realm.

This project is working to address these issues and, on the 24th-27th February, the Charles Darwin Research Station (CDF) in Puerto Ayora, Galapagos Islands, played host to the first International Workshop on Marine Bioinvasions of Tropical Island Ecosystems. The event attracted 58 invasive species expert participants from around the world to share their knowledge

on identification and detection, prevention, management, control and eradication methods with local authorities and local institutions. The workshop, conducted in Spanish and English, was convened by the CDF together with the Universities of Southampton and Dundee, UK in partnership with Williams College, Mystic, USA.

A particularly exciting highlight of this important gathering of the experts came from a pre-workshop boat excursion to Tortuga and Academy (P. Ayora harbour) bays to sample the biofouling communities. This has resulted in the first record (in the Galapagos Islands) of the known invasive species *zoobotryon verticillatum* (Spaghetti bryozoan), with several other species identified as potentially new to the islands.

For more information on project 19-009 [click here](#) or contact Ken Collins at [kjc@noc.soton.ac.uk](mailto:kjc@noc.soton.ac.uk)



Ascension Squirrel  
Fish. Credit: Shallow  
Marine Survey Group  
(SMSG)

## Tracking the Fish of Ascension Island and the Cayman Islands

As Ascension Island Government reviews its options for the sustainable management of its 200nm exclusive economic zone, this project led by AIG Conservation Centre is collecting the valuable data needed to inform these decisions.

As an important commercial fish species, it is important to know how stocks of the yellowfin tuna (*Thunnus albacares*) migrate and move, both in Ascension's waters and also the wider Atlantic region. The AIMS team are currently deploying Pop-up Satellite Archival Tags (PSAT) on the tuna, which will record depth, salinity, temperature and, most importantly, geographic position using light-based geolocation. The movement of *T. albacares* in the tropical mid-Atlantic is not well known and it is unclear what effect a mid-ocean island such as Ascension Island might have on migration patterns. Information from the tags will fill the gaps in knowledge to better implement appropriate and sustainable protective measures. The tags are being deployed with the kind assistance of the experienced spearfishermen of Ascension Island Fishing Charters who lure

the tuna up to within a few metres of the surface using chum and then inserting the PSAT using a specially adapted speargun tip. This ensures that the tag is correctly placed in the dorsal muscle mass, providing a secure anchor point and avoiding injury to internal organs. As the tuna swims away, the spear is pulled cleanly from the tissue, leaving the tag securely anchored beneath the skin. This method ensures that only tuna of a suitable size are tagged, and avoids fish fatigue. Once the 6 month data collection period has finished, the tag automatically detaches from the anchor and floats on the ocean surface where it transmits the archived data to passing ARGOS satellites that can then be downloaded.

The success of our marine research relies heavily on the support of the local community and overseas funders and collaborators, for which we are continually thankful.

For more information on project DPLUS021 [click here](#) or contact Nicola Weber at [nicola.weber@ascension.gov.ac](mailto:nicola.weber@ascension.gov.ac)



# Promoting the creation and appropriate management of protected areas

Anguilla and the Cayman Islands are low-lying and wind-swept, both are limestone-based and boast miles of white-sand beaches. Wetlands speckle both archipelagos and mangroves, coral reefs, sea grass beds, and sand dunes all represent critical habitats that are both ecologically and economically important. The differences in size of both land mass and population affect how islanders identify with the natural environment and its protection.

This project aims to take a comprehensive look at protected areas and the means of identifying sites of ecological importance, including those that provide critical ecosystem benefits. The result of ecosystem service assessments carried out by the project and its partners are now being used to identify sites where the ecosystem services can be used as a further argument to support protection, and to determine how we can incorporate these priority areas into the

national protected area networks and raise public awareness.

As this project enters its final six months, we want to ensure that project outcomes help establish a momentum that will propel the National Trusts in Anguilla and the Cayman Islands forward, establishing a framework for a sustainable future beyond the life of the project, contributing to habitat, species, and ecosystem services protection and the formation of sustainable and appropriate management structures. It will also raise awareness of the value of a healthy, resilient natural environment.

For more information on project DPLUS013 [click here](#) or contact Farah Mukhida at [antpam@anguillanet.com](mailto:antpam@anguillanet.com)



## Fairer conservation of Bwindi Impenetrable National Park, Uganda

Local people's sense of injustice over national park conservation is equally important in driving illegal activities as rural poverty. Adopting an equity perspective can help improve efforts to integrate conservation and development so that local communities benefit. But it also provided a challenge, what is 'equitable conservation' and how can practitioners best achieve it?

In January 2015, we held a workshop on 'Enhancing Equity within Conservation' at Bwindi Impenetrable National Park, Uganda, attended by representatives from local government, local communities, conservation organisations and staff from the Uganda Wildlife Authority (UWA).

Everyone recognised that local people's input into decision-making was vital, but stronger accountability was a key issue for local communities who also placed great emphasis on the recognition of rights. While discussions continued on what equitable conservation means, everyone did agree that there is no right or wrong definition. Rather, it's important to recognise that different people have different perspectives to avoid misunderstandings, enable negotiations and work more closely together.

The second part of the workshop focused on ways to strengthen, in equity terms, the next round of tourism revenue sharing at Bwindi. Each stakeholder group identified a series of practical measures including developing a simple FAQ factsheet for local people to better understand their rights, supporting stakeholders to identify sustainable projects for funding, and continuing the community based monitoring started by the project.

Discussions and debates at the workshop provided valuable insight into how fairness can make protected area conservation more effective and sustainable. For local people of Bwindi, the workshop enabled them to speak directly to UWA, local government and the conservation sector about what fairness in protected area conservation means to them and how we can all achieve it.

For more information on project 19-023 [click here](#) or contact Dilys Roe at [dilys.roe@IIED.org](mailto:dilys.roe@IIED.org)