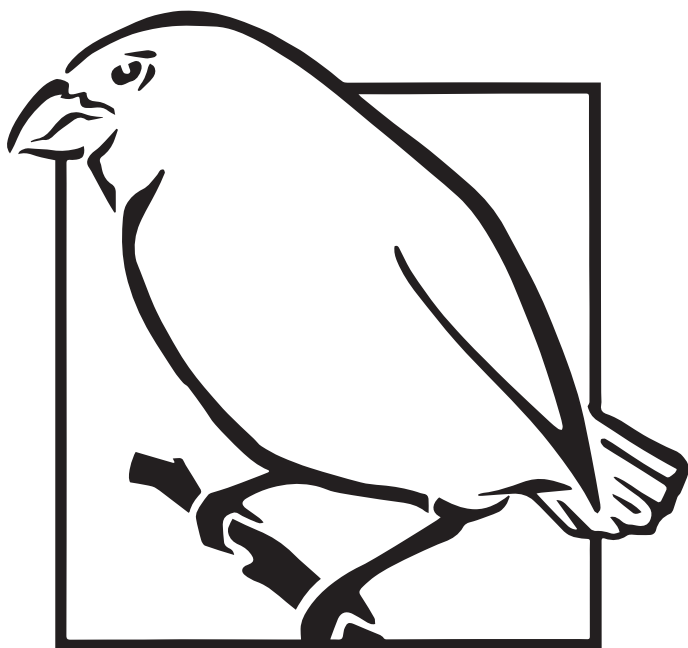


Newsletter

August 2017



The Mt Vesey leaf hopper from St Helena is very rare and was reconfirmed in 2017, Credit: Howard Mendel



**DARWIN
INITIATIVE**

The Darwin Initiative supports developing countries to conserve biodiversity and reduce poverty. Funded by the UK Government, the Darwin Initiative 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 Fauna and Flora (CITES)

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*Pirogues returning from mangrove fishing grounds,
Credit: Garth Cripps, Blue Ventures*

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Fishing boats on the Gulf of Mottama, Myanmar, used for surveying shorebirds, Credit: BANCA

Publicity and information about the Darwin Initiative

For more information on the Darwin Initiative please visit [gov.uk/government/groups/the-darwin-initiative](https://www.gov.uk/government/groups/the-darwin-initiative)

For further details about current and completed Darwin Initiative projects, including their final application forms, please visit darwininitiative.org.uk

We also have a blog, that includes news and thoughts on issues being tackled by the Darwin Initiative – both at the project and programme level. You can read it here darwininitiativeuk.wordpress.com

We're also keen to share other Darwin project blogs. If you have a blog you'd like to share on our website, please get in touch at darwin-newsletter@ltsi.co.uk

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 Initiative funding. This is important as it helps us to ensure the Darwin Initiative retains a high profile and to secure continued Government funding.



“
After the first few funding rounds I remember describing the Darwin Initiative to a journalist as representing the most effective use of government funds – such was the impact already being achieved
”

Introduction from the Chair of the Darwin Expert Committee

This year the Darwin Initiative is 25 years old! Launched at the Earth Summit in Rio de Janeiro in 1992, the Darwin Initiative was an important and distinctive response by the United Kingdom to the challenges of the UN Convention on Biological Diversity.

At the time, I was a botanist at the Natural History Museum in London and I still recall the excitement we all felt that biodiversity was finally the focus of attention and that we, in the UK, were willing and able to do something positive for nature. After the first few funding rounds I remember describing the Darwin Initiative to a journalist as representing the most effective use of government funds – such was the impact already being achieved.



Compared to some other sources of funding for biodiversity, such as the Global Environment Facility, projects supported by the Darwin Initiative have been, from the outset, modest in scale. Their impact, on the other hand has been enormous. I believe this reflects the quality and experience of the international teams behind the proposals, the tightly focused guidelines for managing and evaluating projects and the fiercely competitive selection process.

After 23 rounds of funding, over 1000 projects in 159 countries have been supported, at a total cost to date of £140m. Equally important is that the Darwin Initiative has not stood still but has evolved in response to changing priorities and needs. Crucially, it now forms part of the Government's Aid Strategy and, while it is open to applications from organisations based anywhere in the world, it targets resources to projects in Least Developed, Low Income and Lower Middle Income Countries. There is also an important focus on the UK's Overseas Territories.

Round 24 is now open for proposals and the hard work will start again. The application process is, quite rightly, very challenging and submitting a strong proposal is not easy. Neither is the rigorous selection process. I am privileged to Chair the Darwin Expert Committee which reviews proposals and makes recommendations on them to Ministers and I am acutely conscious of how much time and energy the 20 other members of the Committee put in to reviewing proposals. Fortunately, the Committee is well-supported in its efforts by both the Secretariat from Defra and the team from LTS International who administer the scheme. Regrettably, the biodiversity crisis is now even more acute than it was in 1992. It is good to know that the Darwin Initiative will continue its important contributions to shaping a more sustainable future.

Professor Stephen Blackmore CBE VMH FRSE

Chair of the Darwin Expert Committee



Mud crabs from a mangrove fishery
Blue Ventures, Credit: Garth Cripps

Alleviating poverty through community-led mangrove management in western Madagascar

Back in 2012, the Darwin Initiative awarded Blue Ventures' Blue Forests programme a three-year grant to support our mission to help coastal communities generate income from the sale of carbon credits and forest products through sustainable mangrove management.

Thousands of people in Madagascar depend on mangroves for the shrimp and crab fisheries they maintain and the fuel and building materials they provide, as well as other vital ecosystem services. Tragically, mangroves are being lost faster than any other type of forest, and their precious goods and services will disappear if deforestation is not urgently addressed.

Mangroves store considerable amounts of carbon, and this 'blue carbon' has a value in international carbon markets. The Darwin Initiative funding supported our research into quantifying the greenhouse gas emission reductions that could be achieved by conserving mangroves, ensuring the proper valuation of carbon credits which then have the potential to provide income for local communities. This was backed up by studies on the socioeconomic impacts of mangrove conservation, to ensure that blue carbon initiatives bring equitable benefits to mangrove-dependent communities.

Our Blue Forests team has built the capacity of coastal communities to manage their mangroves sustainably and, recognising the intrinsic link between mangroves and small-scale fisheries, worked with them to develop pragmatic mangrove fisheries management approaches. These include the use of temporary and permanent closures of mangrove fishing grounds to rejuvenate and sustain mud crab and shrimp fisheries.

“

Thanks for the Darwin Initiative's early support, we were able to develop a replicable blue carbon model that works for communities

”

Five years on, we are now promoting blue carbon initiatives at two key mangrove sites in Madagascar, and advising our conservation partners on setting up community-led mangrove management at three more sites. Thanks to the Darwin Initiative's early support, we were able to develop a replicable blue carbon model that works for communities, and this year we are thrilled to be upscaling this model beyond Madagascar's shores by supporting partners in Indonesia and the broader southeast Asia region.

For more information on project 19-016, click [here](#) or contact Project Leader Alasdair Harris, al@blueventures.org



Not seen since 1960, Basilewsky's Crane fly was rediscovered in 2016, Credit: Liza Fowler

Discoveries are just the tip of the crane fly's wings – Darwin's legacy of invertebrate conservation on St Helena

Imagine your surprise if you rediscovered a species that was thought to be extinct. That is exactly what happened to insect specialist Liza Fowler last year when a crane fly landed on her arm one day during a routine survey. Thankfully Liza had her camera close by and was able to take a photo before it flew away. The photo was sent to an expert and was confirmed to be the long lost Basilewsky's crane fly – not seen since the 1960s. "Capturing the Basilewsky's crane fly was a real stroke of luck; one flew into the car at High Peak and landed on me" Liza exclaimed.

Discoveries like Liza's are a regular occurrence on St Helena, a tiny remote island in the South Atlantic Ocean, halfway between South America and Africa. Oceanic islands like St Helena have a high level of endemic species – species that are found nowhere else on earth – and due to a lack of entomological surveys in the past there is a lot to learn in the present. The crane fly is just one of many modern day discovery stories on St Helena. At least a dozen new insects have been added in the last few years to the known 1435 species of invertebrates – of which a staggering 30% are endemic. And none of it would be possible without the help of Darwin.

Darwin has facilitated these discoveries through their support with invertebrate projects. Their contribution of

over £500,000 for five research projects since 2010 has had great benefit to the island's natural heritage. There are many aspects of the legacy of Darwin's involvement in invertebrate conservation on St Helena.

Education is a major component of the invertebrate projects. A forest schools programme (also set up through a Darwin grant) has taught almost every school aged child on St Helena the importance of conservation, with a big emphasis on the role bugs have in the ecosystem. And it's not just a one off session; students participate in environmental education for an entire term. Environmental education packs are distributed to schools to enable the learning to be continued long after the projects have finished.

Training and up-skilling of local and international project staff has greatly increased St Helena's capacity for conserving invertebrates. There are now several conservationists with invertebrate identification and survey skills who can continue bug research and pass on their knowledge to others.

Conservation efforts for invertebrates are now commonplace and endemic species are protected by law. All endemic invertebrates are listed as protected species and all future developments must mitigate their impacts on endemic insects.



St Helena Spiky Yellow Woodlice are a flagship species to promote conservation, Credit: Liza Fowler

A current survey of invertebrates at the St Helena National Trust is the most comprehensive ever conducted on St Helena. For the first time all habitats are being surveyed simultaneously, over the course of a whole year. Linked with weather and habitat information, these surveys will allow us to determine species abundance and diversity and determine if conservation efforts for habitats are also working for invertebrates. Specimens collected in the survey will be stored in the St Helena Museum, the first invertebrate collection to be permanently housed on island. The collection will be a very useful resource for future research.

Before Darwin supported invertebrate projects on St Helena, very little was known about the island's creepy crawlies. Historical specimens sat in the basements of natural history museums around the world and reports sat on shelves unread. There were only few locals who could identify their endemic bugs. Now, every school child can identify at least a few endemic insects, and there are local invertebrate experts. There is interest and enthusiasm in the island's unique bugs. Invertebrates are embedded into existing conservation efforts and are protected by law. The Darwin projects have built on each other to create a strong base of research and practical conservation for bugs on the island. It is fair to say that thanks to Darwin the future of invertebrate conservation on St Helena is looking very bright.

If you are interested in learning more about the projects this article refers to, find out more on our website: **18-020**, **19-029**, **EIDCF004**, **DPLUS025**, **DPLUS029**, and **DPLUS040**



Surveying moths involves using bright lights and a portable generator in the Peaks National Park, Credit: David Pryce



*Spoon-billed sandpiper chicks,
Credit: Pavel Tomkovitch*

Saving the critically endangered Spoon-billed Sandpiper from global extinction

From 2012 to 2015, funding from the Darwin Initiative was crucial in improving the chances of survival of one of the world's rarest migratory shorebirds.

The Spoon-billed Sandpiper is a flagship bird species of the one of the world's greatest but most threatened migratory flyways for shorebirds - the East Asian-Australasian Flyway. Numbers of many shorebird species on the flyway have been plummeting and the Spoon-billed Sandpiper was the most extreme example. In 2010 it was estimated that the population was declining at a rate of 25% per year with about 400 individuals remaining. Urgent actions were needed on the breeding grounds in Siberia and wintering grounds, especially Myanmar (Burma). This is where Darwin funding stepped in to boost preliminary actions.

“
In 2010 it was estimated that the population was declining at a rate of 25% per year with about 400 individuals remaining

In Siberia, some eggs were collected to establish a captive breeding programme in Slimbridge, Gloucestershire and other eggs were hatched in-situ. Chicks were provisioned with food prior to their release and migration to increase their chance of survival.

By 2016, 111 Spoon-billed Sandpipers had migrated through this programme, significantly boosting the global population and in Slimbridge, eggs were laid by Spoon-billed Sandpiper for the first time in captivity.

In Myanmar (Burma), impoverished coastal communities are forced to resort to shorebird hunting. Darwin Initiative funding supported development of these communities in order to protect the threatened Sandpiper, by establishing and building the capacity of local conservation groups as empowered groups delivering livelihoods interventions. The project also supported consultations for establishing a Ramsar Site to protect the shorebirds which was finally approved in May this year following a long period of consultation with government agencies. Most importantly the Darwin Initiative funding laid the foundations for a large Swiss-funded development project, which is addressing the development needs of those local communities through improved coastal natural resource management while also protecting shorebirds including the Spoon-billed Sandpiper at its most important wintering site.

Although there are still challenges to saving the Spoon-billed Sandpiper, in contrast to the situation in 2010, before Darwin funding was secured, there are indicators that the population is no longer steeply declining and may already have stabilised.

For more information on project 19-012, click [here](#) or contact Project Leader Paul Insua-Cao, paul.insua-cao@rspb.org.uk



Six stamps, illustrated by Sara Menon, celebrating 25 years of Darwin, Credit: Jersey Post

Durrell and Darwin celebrated on Jersey stamps

Six stamps and a Miniature Sheet, illustrated by artist Sara Menon, were issued by Jersey Post on Wednesday 14 June to celebrate the legacies of famous naturalists Gerald Durrell and Charles Darwin – and the 25th Anniversary of the Darwin Initiative! The animals and birds that feature on the stamps are subjects of conservation projects undertaken by the Durrell Wildlife Conservation Trust with support from the Darwin Initiative.

The Durrell Wildlife Conservation Trust was established as an international charity by naturalist and author, Gerald Durrell OBE in 1959. It has partnered with the Darwin Initiative on many occasions during the course of its conservation programme as Lee Durrell, Honorary Director of Durrell Wildlife Conservation Trust explains:

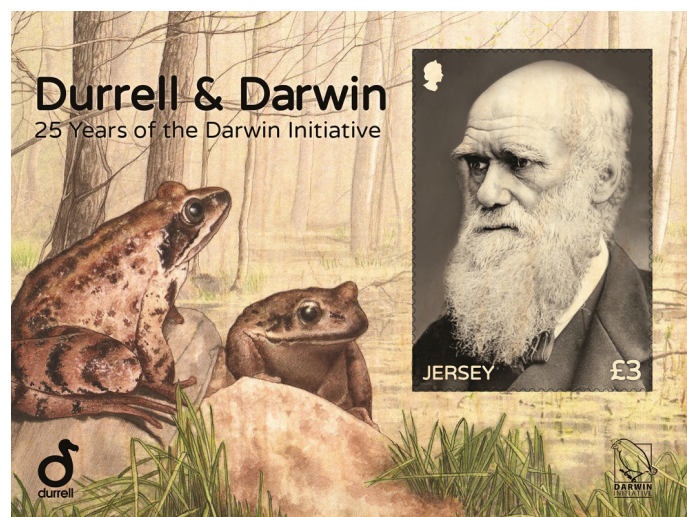
“The Darwin Initiative has provided significant support to the Durrell mission for a quarter of a century, and I am delighted to see the relationship commemorated in this set of stamps produced by Jersey Post. The images depict the creatures we are helping to recover from the brink of extinction, all of which are ‘typical’ Durrell species, from a very large frog to a tiny pig – the small and less showy animals which Gerald Durrell said, have just as much right to exist as the big, cuddly ones. Thanks once again to Jersey Post for bringing attention to our work in this unique way!”

Featured on the stamps are: the mangrove finch, Livingstone’s fruit bat, Telfair’s skink, the mountain

chicken, Hispaniolan solenodon and the pygmy hog. The accompanying Miniature Sheet, printed on FSC certified sycamore wood, features a portrait of Charles Darwin, a source of inspiration for naturalists and conservationists all over the world: “This is the first time a Jersey stamp has been printed on wood,” comments Melanie Gouzinis, Head of Philatelic at Jersey Post. “We felt the technique was a perfect fit for this issue and the fact that the wood grain can be seen through the image means that each of the Miniature Sheets is unique.”

Jersey Post’s Durrell & Darwin stamps are available to buy from all branches of Jersey Post and can be ordered now at www.jerseystamps.com.

If you are interested in learning more about the projects this article refers to, find out more on our website: **15-005, 15-017, 15-038, 17-025, 18-018, EIDPO031**



Miniature sheet, illustrated by Sara Menon, Credit: Jersey Post



Sailing up to the settlement on Tristan, with volcano set behind, Credit: Clare Stringer

Team Darwin: A history of success on Tristan da Cunha

The Tristan da Cunha archipelago is a hotspot of unique island biodiversity, and the environment plays a crucial role in both the identity and livelihoods of the local Tristanian population. However, until the Islands' first Darwin Initiative project in 2003 little was known about the ecosystems themselves.

This first project created a Marine Stewardship Plan and database that is used by islanders to aid sustainable decision-making in relation to the vital lobster fishery upon which 80-90% of their income relies.

The success and reach of this first project was considerable, and soon a second project was launched to develop a Biodiversity Action Plan. A turning point for the island came then as a local Conservation Officer was employed, sowing the seeds for a Conservation Department which was later formed by four passionate Tristanians. Using the skills learned during Darwin projects the department now leads on all biosecurity and biodiversity on the islands and monitors many species (Tristan mainland alone has more threatened species than the UK!).

Darwin has had a systemically transformative impact on this Territory in ways that it could not have in larger countries, and the success has continued over a further 5 projects between Darwin and Tristan. The RSPB has been delighted to facilitate many of these on Tristan's behalf, and are very happy that this effective partnership

will continue to 2020 with the recently-funded project 'Securing the future of Tristan's marine environment', which will consolidate marine data, fill in gaps essential to marine protection and invasive species decision making, and provide hands-on training to the Head of the Tristan Fisheries Department.

With the support of The Darwin Initiative, Tristan has become an island of conservationists - you only have to look out to sea to see this, as the self-titled and now long-standing 'Team Darwin' go to work on their boat 'The Darwin Express'!



The 'Darwin Express' boat, Credit: James Glass

If you are interested in learning more about the projects this article refers to, find out more on our website: **12-010, 18-017, EIDPO023, DPLUS005, DPLUS028 and DPLUS053**



Public visit to habitat restoration trial plots with Habitats Officer Frin Ross, Credit: Falklands Conservation

Darwin delivers in the Falklands

With eight Darwin Initiative projects awarded to Falklands Conservation (FC) alone over the last thirteen years, the contribution of Darwin to delivering environmental research, practical conservation and biodiversity policy development in the Falklands cannot be underestimated.

FC is a small conservation charity based in the Falklands, partnering with the local and international community to conserve the Falkland Islands' natural environment. External funding is essential to the delivery of its organisational objectives. FC's Darwin projects have discovered new species to science, delivered Species Actions Plans, changed national policy, built local capacity, and educated and trained the local community, to name but a few of their achievements!

The benefits continue today, well beyond the life of each project. Following native seed trials and habitat restoration technique development delivered through Darwin Initiative projects, FC now has a Habitat Restoration Officer working with landowners on restoration projects tackling habitat loss in the Islands. New records and even new species to science are still being identified two years after samples of mosses, liverworts and lichens were collected through FC's 'Lower Plants' project. The Falkland Islands National Herbarium at FC now houses lower plants specimens which can be accessed for research and educational purposes.

Darwin Initiative funded projects aimed at understanding Falklands' raptor populations and landowner issues

have led to updated population estimates and Species Action Plans for raptors of conservation concern, and influenced Government policy development on control measures. After a Darwin Initiative funded Biodiversity Action Planning project, National Biodiversity policy was aligned with delivering CBD targets and strategies are still being developed to provide more focussed and effective conservation action. FC now sit on the newly formed Biodiversity Working Group.

“

Darwin projects have discovered new species to science, delivered Species Actions Plans, changed national policy, built local capacity, and educated and trained the local community, to name but a few of their achievements!

”

There are many more examples of how much Darwin Initiative has, and continues to deliver in the Falkland Islands! Congratulations on 25 years!

If you are interested in learning more about the projects this article refers to, find out more on our website:

13-022, 19-022, EIDCF002, EIDCF014, EIDCF019, DPLUS003, DPLUS017 and DPLUS023



Nepal Vultures feeding in one of the 'Vulture Safe Zones' in Nepal, Credit: Chris Bowden

Asia's Gyps Vultures - from crisis to recovery

In 2003, after years of severe and dramatic declines in Asia's vultures, the breakthrough was made that veterinary non-steroidal anti-inflammatory drug diclofenac is fatal to vultures and the main cause of the 'Vulture Crisis'. Immediate action was needed and The Darwin Initiative committed their full support.

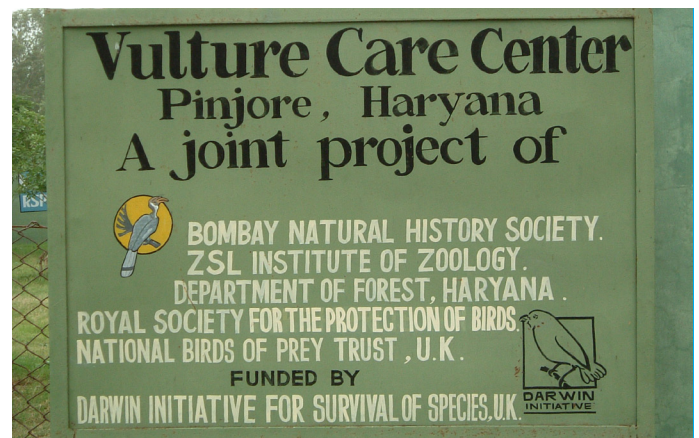
Darwin provided further long-term support with post-projects through to 2015. It is thanks to this reactive and timely support and commitment that the then three most endangered vulture species are today showing early signs of recovery, with population declines in India and Nepal now slowed. In some areas there are even local signs of stable and recovering populations!



Chicks from successful conservation breeding in Pinjore, Credit: Melissa Nollet

This crisis is unusual in conservation as it is caused by a single problem. The approach to recovery, however, and so the Darwin projects, has been incredibly diverse. Darwin was involved in establishing much of the work that the partnership known as SAVE (Saving Asia's Vultures from Extinction) now continues to build

upon. The progress that SAVE has made includes the establishment of 12 'Vulture Safe Zones', 5 breeding centres which will be celebrating their first releases this year, the identification of a safe alternative NSAID, the banning of veterinary use of diclofenac across all vulture range states in the Indian subcontinent, and improving capacity of NGOs and Governments involved in vulture conservation.



Whilst there is still a long way to go before vultures will be safe from diclofenac in Asia, Darwin's willingness to respond immediately to the NSAID discovery in 2003 has saved three very important and iconic species of vulture and provided the tools for the SAVE partners to continue improving their conservation prospects. Today a similar Vulture Crisis caused by other forms of poisoning has erupted in Africa for at least six vulture species, and we hope that they too are lucky enough to have a Darwin Initiative guardian come to their aid before it is too late!

If you are interested in learning more about the projects this article refers to, find out more on our website: [12-027](#), [18-008](#), [EIDPO005](#), and [EIDPO022](#)



Schoolchildren in Grand Cayman with 'A Parrotfish's Tale' by Christina Maas, Credit: CCMI

Coral gardening and action plans to protect key species balancing reef ecosystems in the Cayman Islands

Darwin Plus awarded the Central Caribbean Marine Institute (CCMI) their first grant in 2013 with the aim of expanding the protection of endangered corals in the Cayman Islands.

The collaboration helped develop important public-private partnerships between the Marine Institute, the Cayman Islands Department of Environment (CIDOE), local dive operators, and experts in coral restoration from the University of Miami. Fragments from only 5 wild coral colonies have been grown into hundreds of new corals at Little Cayman. The project has continued to expand and a new permitting process and policy established by the CIDOE has allowed several local dive operators to become coral gardeners as well. In the meantime, the Little Cayman project continues to expand with 14 genotypes and thousands of corals, 10 restoration sites, numerous experiments, publications and graduate degrees.

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At the heart of CCMI’s mission is bridging the gap between science and education
”

A second Darwin Plus project was recently funded and is geared toward developing a biodiversity action plan for herbivorous fish. Certain fish species play a significant role in maintaining the reef ecosystem’s biodiversity by balancing the levels of algae and space available for

invertebrates like corals and sponges. These species will be included in an action plan that is proposed to the Cayman Islands Department of Environment. The project is also offering CCMI an opportunity to survey all three islands which they have not done since their first survey in 1999. Results from the work will be available on the organisation’s **new website**. A small group of stakeholders are also being recruited to become local experts, helping to expand the knowledge and further broaden the understanding about the roles different fish play on coral reefs.



Fish survey, Credit: CCMI

At the heart of CCMI’s mission is bridging the gap between science and education. The organisation hosts over 20 residential educational programmes each year for local and international students. Darwin Plus has provided a perfect platform that expands well beyond the originally proposed project focused on science and management, to translate Darwin’s scientific discoveries into a stimulating K-12 educational curriculum.

For more information on project DPLUS061 contact Project Leader Carrie Manfrino, manfrino@reefresearch.org



Women planting Vetiver helped by eco-guardians, a much valued but rare species due to overexploitation, Credit: Idrissa Ganame

“War-tested” conservation through elephant-centred CBNRM: the Mali Elephant Project

The Darwin Initiative enabled the Mali Elephant Project to build on a successful model of “elephant-centred” community based natural resource management (CBNRM) created in collaboration with the communities living around the elephants’ only source of late dry season water. So successful was this model that other communities asked for help to implement the same approach.

However in 2012, the elephant range was plunged into conflict. Almost overnight, government retreated to the capital leaving the area lawless and overrun by rebel and extremist armed groups. Thanks to the continued support of the Darwin Initiative, the project was able to adapt its response and continue its work, not only helping local communities reap the livelihood benefits of CBNRM but also in promoting community solidarity and social cohesion.

“
If the elephants disappear it means the environment is no longer good for us
”

Furthermore the trust established through the community work meant it was able to mobilise a community response to the emergence of poaching that accompanied the insecurity. Local community leaders denounced poachers as thieves and the project engaged local youth to create vigilance networks to watch for poaching, while at the same time working in natural resource protection. Over 650 young men have been dissuaded from joining the armed groups, as being

an “eco-guardian” represented a safer occupation that carried local status.

The second Darwin grant enabled the Mali Elephant Project to further develop its approach in providing local benefit from wise resource management through working with women’s associations in establishing income generating activities. The women choose the activity according to their habitual livelihood and environment, while the project trains them in book-keeping, revenue-sharing, management and technical aspects.

These activities also help build a synergy between the women and the young men comprising the teams of eco-guardians who provide the manual labour required.



Forest with (left) and without (right) CBNRM

Written by Dr. Susan Canney, Director of the Mali Elephant Project

If you are interested in learning more about the projects this article refers to, find out more on our website: **19-010** and **23-022**

For more information on the Mali Elephant Project, visit their website or contact Susan Canney, susan.canney@zoo.ox.ac.uk



*Walking the Peaks,
Credit: Edward Thorpe*

Building on success: insights from a cluster of Darwin Initiative projects in Uganda

Uganda is a country with remarkable natural beauty, important conservation value, a dynamic cadre of conservation professionals who are keen to engage with international best practice, and continuing challenges of poverty, conflict and lack of capacity and infrastructure. The three of us have been fortunate to work closely together on five Darwin-funded projects in Uganda since 2012. These projects illustrate the value of having overlapping teams carrying out complementary projects, the benefits that can be gained from building on the achievements of one project to provide a springboard for further projects, and of long-term engagement and investment in a country, particularly in building in-country capacity for conservation.

The Biodiversity Team at the International Institute for Environment and Development (IIED) has worked in Uganda since 2010. Early on, the need for a network of conservation professionals was identified in order to share experiences, best practice and international lessons, particularly on understanding the complex linkages between poverty and environment. Thus the **Uganda Poverty and Conservation Learning Group** (U-PCLG) was born, funded by the **Arcus Foundation**.

U-PCLG was the ideal vehicle to translate research findings into real-world policy and action. As the best way to learn is by doing, a case study problem was identified, research done to understand the problem,

and then the U-PCLG was supported to advocate for policy change, using a range of approaches including policy briefs, meetings and workshops. This idea was taken up and funded by the Darwin Initiative, in our first project "**Research to Policy – Building Capacity for Conservation Through Poverty Alleviation**", which started in April 2012. The project took wildlife crime in Bwindi Impenetrable National Park as the case study, and chalked up notable success in changing park-level policies, including an increase in the share of income from gorilla tracking permits that is given back to local communities. It also saw the nascent U-PCLG transformed into an active and empowered group, and resulted in a spin-off project, funded by the Arcus Foundation, to evaluate the tourism revenue sharing scheme at Bwindi.

With the learning and partnerships gained from the Bwindi project, we submitted a proposal to Darwin with in-country partners the **Wildlife Conservation Society** and the **Uganda Wildlife Authority** (UWA). This extended our approach to tackling wildlife crime to Uganda's largest and oldest national parks, Queen Elizabeth and Murchison Falls, by using cutting-edge research to understand the motivations of natural resource users. Our proposal was transferred to the newly-instituted sister grant scheme to Darwin, the Illegal Wildlife Trade Challenge Fund, and became the **Building Capacity for Pro-Poor Responses to Wildlife**



Credit: Dilys Roe

Crime in Uganda. Most of our final year of this project involved working with park staff to develop feasible action plans to change the way wildlife crime is tackled, from law enforcement to a community-engagement approach. Following calls from UWA for support to implement these plans, a new IWT Challenge Fund project is now underway to build UWA's capacity in community engagement approaches to tackling wildlife crime.

Whilst implementing these projects, we worked with our partners to identify other critical issues for supporting poverty alleviation in Uganda while conserving nature. New projects addressing these issues supported by Darwin include supporting Uganda's National Environmental Management Authority to understand the **impacts of a biodiversity offset** for a large hydropower dam on people and wildlife, and improve Uganda's ability to implement effective offsets. This builds on another IIED-led Darwin project that supported Uganda and other African countries to **mainstream biodiversity in national and sectoral development policy**. Meanwhile at Bwindi we have begun working with private sector professionals to improve the quality of **local tourism products and services** in order to increase local spending by gorilla tourists, linking back to the original Bwindi project that showed local people resent gorilla conservation because they believe they do not receive a fair share of tourism benefits.

We are also evaluating the conservation impact of a public health intervention at Bwindi. This project is notable because it is one of the few projects in the Darwin Initiative's portfolio to be led by a developing country NGO (**Conservation Through Public Health, CTPH**), rather than an international partner. This was made possible by IIED and Oxford University working with CTPH to build their capacity in proposal writing and project implementation, leading to success in accessing Darwin funding. During our last visit to Uganda we tried to spread this support further by training U-PCLG members on applying for Darwin funding. One of the greatest benefits from Darwin's support has been to boost the careers and personal development of Ugandan conservation professionals involved with the projects.

We are very grateful to the Darwin Initiative for their support, and hope that this taster gives an idea of the added value of supporting a network of interlinked projects, in terms of continuity, learning, mutual support and capacity-building.

Written by E.J. Milner-Gulland, Dilys Roe and Julia Baker

If you are interested in learning more about the projects this article refers to, find out more on our website: **19-013**, **19-023**, **EIDPO047**, **23-019**, and **23-023**



Credit: Neil Golding

Marine Spatial Planning in the Falkland Islands

Around three years ago the Falkland Islands, one of the UKs overseas territories in the South Atlantic, implemented a Darwin Project called 'Marine Spatial Planning (MSP) for the Falkland Islands'.

It was implemented by 6 partner organisations – Falkland Islands Fisheries Department, Falklands Conservation, Birdlife International, British Antarctic Survey, Shallow Marine Surveys Group and the South Atlantic Environmental Research Institute (SAERI).

The project developed a framework for the implementation of MSP along with a suite of associated support tools. MSP is a practical, stakeholder driven, science-based approach to organising the marine environment and the interactions between its users. It strives to balance the demands for development with the need to protect the marine environment and to achieve social and economic objectives.

Following this work in the South Atlantic, the Falkland Islands Government funded SAERI to undertake a short, follow-on project. There were four goals to this subsequent project; (1) to maintain and update the suite of MSP tools (such as the interactive web-based GIS system); (2) to undertake an assessment of fishing closure areas within the Falkland Islands to assess whether they met international protected area criteria; (3) to undertake a high level review to understand where legislative gaps lie for future MSP implementation; and (4) Propose a long-term future strategy for MSP implementation in the Falkland Islands. The project is progressing well and is due to complete in August 2017.

The continued development of the marine spatial planning process on the Falkland Islands shows the importance of the Darwin Initiative in contributing to sustainable management of the Falklands marine environment.

For more information on project DPLUS027, click [here](#)



Anemones in the shallows of South Georgia, Credit: Simon Morely

Blue carbon, cold water - nature's fightback against climate change

The Antarctic Seabed Carbon Capture Change (ASCCC) project is progressing towards an understanding of cold water blue carbon, following the legacy left by two Darwin grants which enabled explorations of remote marine biodiversity.

Blue carbon is the carbon stored in the tissues and skeletons of ocean organisms. Marshes, mangroves and seagrass beds are key fixers and stores of blue carbon. However, driven by multiple pressures, these areas are declining, and so their importance as carbon sinks is decreasing.

In cold waters, kelp forests are important fixers and exporters of blue carbon, but kelp only thrives on shallow coastal fringes. In deeper offshore waters, the animals, known as zoobenthos, may be able to offset these trends. In particular, the zoobenthos living on polar and subpolar continental shelves, which are hitherto little explored, vast, and potentially increasing in their capacity for carbon storage – this forms one of our planet's **most effective negative (mitigating) feedbacks against climate change**. This is a key ecosystem service that life on the seabed provides our planet, and by protecting these blue carbon productive regions as Marine Protected Areas, we will ensure that nature continues to help us mitigate future climate change.

Following our successful Darwin Initiative funding, in 2011 we used novel apparatus (a camera lander, which can take quantifiable images) and video equipped mini-trawls to explore the Southern Ocean archipelago of

South Georgia. This was one of the most comprehensive investigations of seabed life, and it revealed a rich and abundant diversity of life in the region, even though it appears to be **still recovering from the last ice age**. Further south we investigated the South Orkney Islands, and showed that like South Georgia, there was a **vast stock of blue carbon in the benthos**. In 2013 we returned to South Georgia, en route to exploring deep seabed biodiversity off Tristan da Cunha.

Our expeditions have revealed that polar seabed benthos store a staggering tens of millions of tonnes of carbon per year, worth hundreds of millions of pounds at today's industrial value of carbon capture and storage. Even more importantly, this storage increases with sea ice losses – less sea ice results in longer phytoplankton blooms, giving longer meal times and thus more growth to benthos.

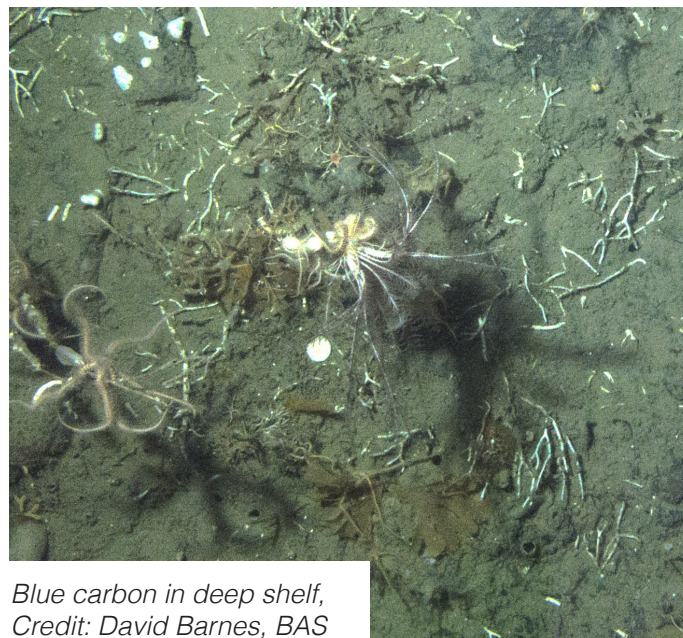
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In the last 25 years, this amazing ecosystem service has doubled around West Antarctica. Year-to-year variation in blue carbon might help explain some variance observed in climate models, and thus their projection

accuracy. Since 2014 we have also explored mid-Atlantic seamounts and islands and the sub-Antarctic islands. These voyages, combined with the recent Antarctic Circumnavigation Expedition (ACE) and upcoming voyages this summer to the Arctic seas, provide a platform towards a broad geographic understanding of Polar blue carbon.

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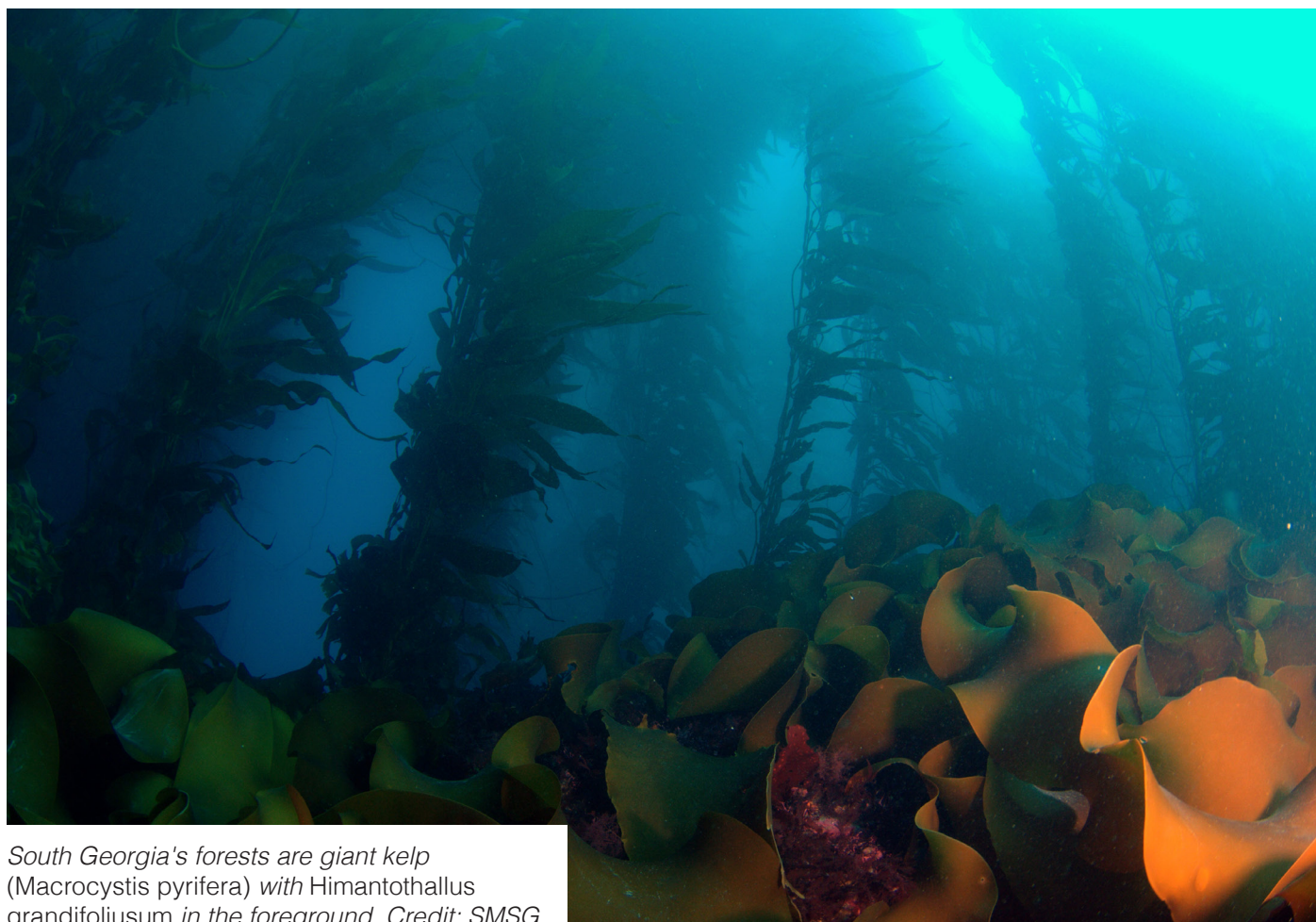
The density of benthos, together with the vast coverage across continental shelves, shows that little is known about a potentially very important ecosystem service, which takes place on polar and subpolar seabeds. Our research is still at the beginning of this story. However, we have a skilled project team spanning five continents armed with a wealth of samples, enabling us to estimate a blue carbon budget for polar and subpolar continental shelves in the near future; watch our progress at www.asccc.co.uk and on [@asccc_news](https://twitter.com/asccc_news).



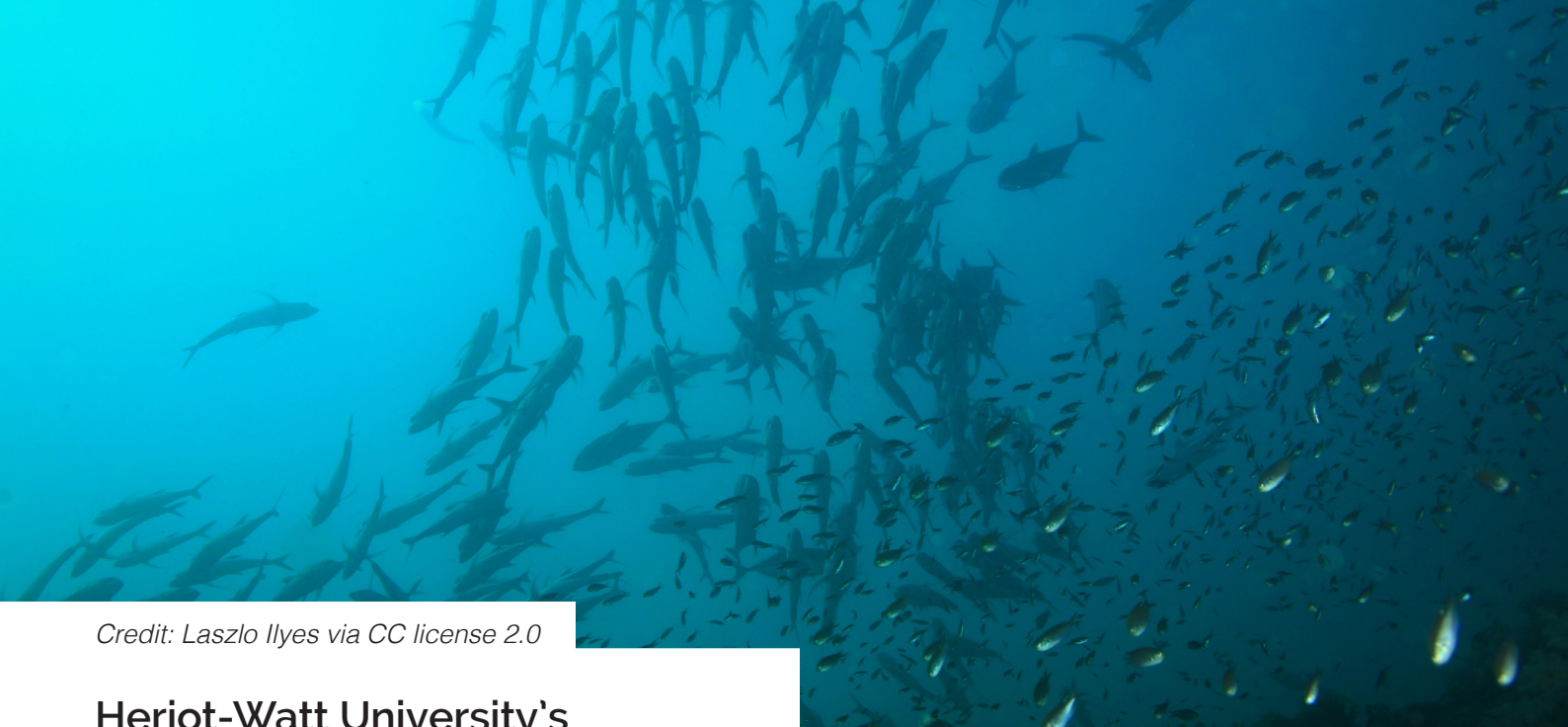
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*Blue carbon in deep shelf,
Credit: David Barnes, BAS*

Written by David K A Barnes, Narissa Bax, Rachel Downey, Christoph Held, Camille Moreau, Bernabe Moreno, Maria Paulsen and Chester J Sands

If you are interested in learning more about the projects this article refers to, find out more on our website: **18-019** and **EIDCF013**



South Georgia's forests are giant kelp (Macrocystis pyrifera) with Himantothallus grandifolius in the foreground, Credit: SMSG



Credit: Laszlo Ilyes via CC license 2.0

Heriot-Watt University's network of marine biodiversity projects

Heriot-Watt University and its collaborating partners in Ecuador, Colombia and Panama led six Darwin Initiative marine biodiversity projects between 1997 and 2008 – projects that were inextricably linked and continue to be so today.

Darwin project workers from Ecuador and Colombia first met up during the final 6-029 Project Conference in Guayaquil in 2000, reuniting alongside Panama Project team members at the closing EIDPO017 workshop in 2008. Since then, this network of UK and Latin American researchers maintains regular contact and collaborations in the region.

Ecuadorian Darwin Fellow, Maria Fernanda Arroyo, curates the marine invertebrate mini-museum collection initiated during the Darwin project. The teaching specimens in this collection have proven to be an extremely useful ongoing resource for the marine science students at Universidad de Guayaquil. Another Ecuadorian Fellow, Maritza Cardenas, later completed her PhD studies at Heriot-Watt University and, in addition to running an environmental consultancy (BIOELITE S.A.), also set up a collaborating biodiversity network within Ecuador - RIEAE (Network for the Study of Aquatic Ecosystems of Ecuador). RIEAE feeds into the wider South American network **SARCE** (South American Research Group on Coastal Ecosystems) which was originally set-up through the global programme, **Census for Marine Life**.

Colombian Darwin Fellows, Anthony Mitchell and Martha Garcia remain working with the Darwin partner **Coralina**. Anthony spent a year at Heriot-Watt University as a Darwin Scholar improving his skills in remote sensing

and GIS. Darwin project 7-147 was the first international collaboration undertaken by Coralina but this quickly led onto others and eventually the establishment of the Seaflower Biosphere Reserve which resulted in **Coralina being recognised internationally in 2010 for its management**. The San Andres Archipelago is a priority region for the **new UK-Colombian funding programme** and Darwin collaborators are discussing potential themes for future projects. Since the Darwin projects in San Andes Archipelago, numerous Heriot-Watt University MSc students have carried out their research dissertation of direct relevance to Coralina's strategies.

Two of the Panamanian Darwin Fellows, who worked on the **Las Perlas Archipelago biodiversity project**, have gone on to succeed in their fields: Jose Miguel Guevara now works for in environmental consultancy in Panama and Inez Campbell completed a PhD degree from St Andrews University (thesis title: The effects of physical, biological and anthropogenic noise on the occurrence of dolphins in the Pacific region of the Panama Canal'). A Colombian student at Heriot-Watt University (Dr Lina Barrios) who became closely associated with the Darwin project in Panama (and did all her PhD field research there) now leads up a **Newton-Caldas project** in the Colombian Caribbean and, like Dr Cardenas in Ecuador, is promoting regional research collaboration interests. One aim of the Darwin teams in Ecuador, Colombia and Panama, along with their UK colleagues, is to coordinate research in these countries (plus Costa Rica) to enhance the biodiversity connectivity understanding of the **TEP 'Marine Corridor'**. The legacy of these Darwin projects is alive and kicking (watch this space!).

If you are interested in learning more about the projects this article refers to, find out more on our website: **6-029, 7-147, 11-015, EIDPS005, 12-021, and EIDPO017**



Lobster from the Tristan da Cunha lobster fishery, Credit: Katie Davis

Newsletter Contacts

The Darwin Initiative Secretariat (Defra)

The Darwin Initiative Secretariat (Defra) The Darwin Secretariat is based in Defra and includes Claire Millar, Fiona Charlesworth, Sally Cunningham and Shaluki Perera.

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

The UK Government's Darwin Initiative aims to promote biodiversity conservation and sustainable use of resources around the world including the UK's Overseas Territories. Since 1992, the Darwin Initiative has committed over £140 million to 1,055 projects in 159 countries.