

Fisherman casting a traditional fishing net
Credit P Bates



November 2015 Newsletter



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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Darwin blog





Female fish processor in Kilifi, Kenya Credit L King

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Women Carrying firewood
in WWC project area, South
West Ethiopia Credit Indrias
Getachew

Publicity and information about the Darwin Initiative

For more information on the Darwin Initiative please visit:

www.gov.uk/government/groups/the-darwininitiative

For further details about current and completed Darwin Initiative projects, including their final application forms, please visit:

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



Making fishing nets in Myanmar. From project 21-012 Credit: P. Bates

A word from Darwin

Welcome to the latest edition of the Darwin Newsletter. Since we last published a newsletter a lot has happened in the world of Darwin.

We have just completed the applications round for Stage 1 of Darwin Main Projects. Yet again we had a huge response with 418 applications received. Yet again the Darwin Expert Committee had a difficult job sifting these applications down to those who should go through to Stage 2. Given the financial and technical commitment required to prepare a stage 2 application, only the strongest have been shortlisted by the Darwin Expert Committee with 63 applications going forward.

All Stage 2 applicants have been invited to a workshop in London on the 29th October. This workshop is intended to support applicants to write good applications that will translate into great Darwin Initiative projects.

The Fellowships, Scoping and Post Projects funding were also launched with the deadline for these applications of 27th October. You can find details of these funding schemes here on the Defra webpages.

We very much appreciate the level of effort that goes into writing a Darwin application. We've had some truly inspiring applications that highlight the wealth of knowledge and expertise there is.

Best of luck to all who submitted or intend to submit an application this year!

Dingolo, a Mutwa elder, shows the group a medicinal herb from the forest Credit FFI/P Wairagala

Traditional knowledge and the Darwin Initiative

Birhane Geremew, a member of the Ganiti Forest Management Association
Credit: I. Getachew



Traditional Knowledge and the Darwin Initiative

This edition of the Darwin Newsletter asked for articles specific to the theme of traditional knowledge.

The **Nagoya Protocol on Access and Benefit Sharing** was adopted on 29 October 2010 in Nagoya, Japan and entered into force on 12 October 2014. Its objective is the fair and equitable sharing of benefits arising from the utilization of genetic resources, thereby contributing to the conservation and sustainable use of biodiversity.

Traditional knowledge and Nagoya are strongly intertwined. The Nagoya Protocol sets out how countries should provide access to genetic resources and associated traditional knowledge by users (such as pharmaceutical companies) whilst ensuring that providers (including indigenous and local communities) receive a fair and equitable share of benefits derived from their use. It provides a basis for greater legal certainty and transparency for both users and providers. The Protocol should create incentives for conserving biodiversity, its sustainable use and enhance the use of biodiversity for development and better human wellbeing.

Traditional knowledge refers to the knowledge, innovations and practices of indigenous and local communities around the world. Developed from experience gained over the centuries and adapted to the local culture and environment, traditional knowledge is transmitted orally from generation to

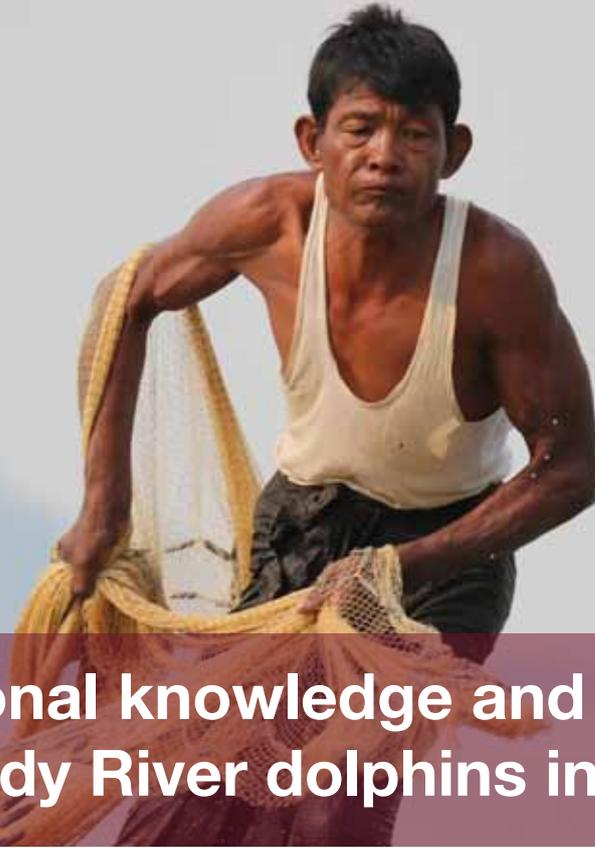
generation. It tends to be collectively owned and takes the form of stories, songs, folklore, proverbs, cultural values, beliefs, rituals, community laws, local language, and agricultural practices, including the development of plant species and animal breeds. Sometimes it is referred to as an oral traditional for it is practiced, sung, danced, painted, carved, chanted and performed down through millennia. Traditional knowledge is mainly of a practical nature, particularly in such fields as agriculture, fisheries, health, horticulture, forestry and environmental management in general.

Supporting the Nagoya Protocol is a priority of the Darwin Initiative. This newsletter is intended to highlight some of the work our projects are doing to utilise and protect traditional knowledge for the benefit of biodiversity.

See the article from Myanmar explaining the connection between Irrawaddy dolphins and fishers. The project is drawing on today's fishers to act as the eyes and ears of the conservation movement, to patrol and report on threats (especially illegal electrofishing).

There is also an excellent article from the Philippines highlighting the value traditional knowledge has for informing future conservation initiatives in areas where data on fisheries is particularly poor.

Fisherman casting
a traditional fishing
net Credit P Bates



Can traditional knowledge and tourism save the Irrawaddy River dolphins in Myanmar?

In March 1996, U Hpone Thant, an expert on Myanmar cultural heritage, led the distinguished Australian cetacean conservationist, Brian Smith on a study visit up the Ayeyarwady River. He showed him a remarkable sight, the symbiotic interaction between wild river dolphins and fishermen.

Brian recorded the scene: “*Fishermen search for dolphins and summon them by tapping the sides of their boat with a conical wooden pin called a ‘Labai Kway’*. If the dolphins “agree” to help the fishermen, one animal slaps the water surface with its tail flukes. One or two lead dolphins then swim in smaller and smaller semi-circles, corralling the fish towards the shore, while the other animals remain outside to guard against escapees. With a wave of their half-submerged flukes, the dolphins then deliver a concentrated mass of fish to the fishermen and “signal” them to cast their net. The dolphins are believed to benefit from this activity by preying on fish whose movements are confused by the sinking net and those that are momentarily stuck on the mud bottom after the net is pulled up”.

Following Brian and U Hpone Thant’s survey,

conservation of the critically endangered Irrawaddy River dolphin (*Orcaella brevirostris*) became a national and international priority.

However, despite positive moves by the Myanmar government (including, in 2005, setting up the Irrawaddy Dolphin Protected Area and outlawing electrofishing, gold prospecting and the use of fixed gill nets), dolphin numbers (and fish stocks) continue to decline such that today the dolphins face the prospect of extinction and the current generation of cooperative fishermen could be the last.

As part of its current Darwin project, the Harrison Institute has teamed up with two traditional fishing communities and two local Myanmar CSOs to try and reverse these trends. Embracing the centuries’ old bond between fisherman and dolphin, today’s fishermen/fisherwomen are being engaged as the eyes and ears of the conservation movement, to patrol and report on threats (especially illegal electrofishing). Meanwhile, the fishing villages are starting to participate actively in responsible tourism as a way of raising living standards and supporting families that can no longer rely on fish for

an adequate income. At the same time, the fishermen and fisherwomen are maintaining their traditions by teaching tourists about cooperative fishing with dolphins; how to use a casting net (great fun!); and also by taking them on tours of their villages. In addition, tourists will be able to buy locally-made handicrafts, which not only include items such as jams, honey, spices, bags and local cigars(!) but also wooden dolphins (made from river drift wood); mini-cast nets (made by fishermen's wives) and miniature Labai Kway (the wooden pins that 'call' the dolphins).

Saving the dolphin is not easy. Others have been, and continue to be, involved in this struggle and, for sure, it will also require a more rigorous enforcement of environmental laws. However, utilising and building on the traditional bond of man and dolphins is helping to raise the profile of conservation within Myanmar and giving an economic incentive to protect not only the dolphin but also a range of other wildlife in this beautiful and as yet largely unspoilt corner of Southeast Asia.

For more information on project 21-012 [click here](#) or contact Project Leader Paul Bates, pjbbates2@hotmail.com



As part of a village tour tourists can learn to cast a traditional fishing net Credit P Bates

Irrawaddy river dolphin Credit P Bates





A fisher estimating that the fish he catches today are much smaller than in past decades. Credit G Petines

Fishers' knowledge of coral-reef fish loss in the Philippines

Philippine waters are a large part of the 'Coral Triangle', a tropical region where a large number of coastal marine species exist. However, this region experiences significant human pressures on the marine environment. The greatest threat to fish comes from overfishing which is impacting the coral reef ecosystems. As there has been no long-term monitoring of small-scale fisheries, the only way to understand population changes is through local knowledge.

Newcastle University and the Haribon Foundation, a Philippine NGO, have been conducting semi-structured interviews with experienced fisherfolk to understand these changes. They were asked whether there were fish species that they no longer catch today but were abundant in the past. These fishers' knowledge surveys were conducted in five key marine biodiversity areas in the Philippines.

Sixty-five finfish species were reported by fishers to have disappeared from their catches between the 1950s-2014. The three most frequently recorded disappearances were of Giant Grouper

(*Epinephelus lanceolatus*), Bumphead Parrotfish (*Bolbometopon muricatum*) and Humphead Wrasse (*Chelinus undulatus*). Most of these fish species identified from fishers' knowledge are top predators, indicating there is a threat to the coral reef ecosystem as well as to the fisheries involved. This highlights that there is a need to shift the fisheries from high trophic level species to still-abundant low trophic level species such as Rabbitfish. A social enterprise focused on sustainable Rabbitfish fishing is being developed and there have been strengthened patrols of fisher compliance with marine protected areas.

This project highlights the essential value of fisher's knowledge in data-poor situations. The evidence from fishers' knowledge of finfish species is now being used to inform the Philippines National Biodiversity Strategy and Action Plan update.

For more information on project 19-020 [click here](#) or contact Project Leader Nicholas Polunin, nick.polunin@ncl.ac.uk



Mustapha Hammou, a community researcher from Ait M'hamed, poses with a field press full of specimens during a plant collection exercise Credit I Tekguc

Traditional knowledge of medicinal root harvesting and plant conservation in Southern Morocco

The Global Diversity Foundation and its partners are taking action to address the threats to vulnerable plants in the High Atlas Mountains. Plant roots, such as the medicinal *Anacyclus pyrethrum* are widely harvested, used and traded across the region. However, these and other medicinal roots, such as *Armeria alliacea*, grow in fragile environments and are threatened by climate change, desertification and soil erosion. Changing livelihood practices such as increases in livestock herding and reduced high altitude barley cultivation are also having a negative impact. Sustainable harvesting of these local plant populations are needed to maintain ecological integrity and livelihoods.

Engaging with High Atlas Amazigh (Berber) communities' to understand their traditional knowledge has provided the basis for identifying and assessing the importance of local medicinal plants. By working with plant harvesters, community researchers and a PhD student, Irene Teixidor, ecological and floristic aspects of communal lands have been studied.

This participatory approach has established a dialogue between the local community perspectives and the scientific approach to plant conservation. Traditional knowledge and practices for sustainable use are being revived, shared and adopted when cultivating medicinal and aromatic plants in community nurseries.

It is found that local memory is a key to learning about local plant population trends. For example, harvesters know when to collect seeds and how to harvest and multiply root cuttings after seed dispersal to achieve maximum regeneration. Engaging with communities to share traditional knowledge is a must for projects addressing biodiversity conservation and poverty reduction. The long-term success of a project depends on establishing an understanding between local and scientific perspectives, and maintaining shared objectives and a common vision.

For more information on project 20-013 [click here](#) or contact Project Leader Gary Martin, gmartingdf@gmail.com or GMartinGDF@aol.com

Cape Verde woman
Credit J Wilson/FFI

General News from Darwin Initiative projects



Dr. Osinubi talking about the AEMLAP at the African Bird Club Annual General Meeting), Credit (African Bird Club),



Experiences under the Darwin Fellowship: African-Eurasian Migratory Landbirds Action Plan (AEMLAP)

In 2014, I was awarded the Darwin Fellowship, allowing me spend a year working directly with the Royal Society for the Protection of Birds (RSPB; BirdLife Partner in the UK).

Prior to this, I was based at the BirdLife International West Africa Sub-Regional Office in Accra, Ghana. I coordinated the UN's Convention on Migratory Species (CMS) working group charged with developing and implementing the African-Eurasian Migratory Landbirds Action Plan (AEMLAP).

AEMLAP (also referred to as the Landbirds Plan) is a BirdLife-led policy instrument of the CMS, aimed at turning the tide on the alarming decline of migratory landbird species in the African-Eurasian flyways region – which comprises Africa, Europe, the Middle East and Central Asia.

As a result of the wide-spread migration pattern across varied terrestrial habitats of the 502 AEMLAP-listed species, the AEMLAP approach has had to look beyond site-based conservation methods to networking diverse local and international activities on a broad scale.

The Darwin Fellowship was particularly effective

in the achievement of two primary objectives: *mentoring and networking*. Being based at the RSPB Lodge in Sandy allowed me daily and personal access to expert guidance on scientific and policy issues from my mentors at the RSPB and the Joint Nature Conservation Committee (JNCC), who supported my fellowship throughout, and a wide range of other key colleagues and AEMLAP associates.

Being based in the UK had the additional benefit of reducing the cost of travel to other European countries, and as such I was able to participate in meetings at the CMS Secretariat at Bonn in Germany, the BirdLife Europe Office in Brussels and Vogelbescherming Nederland (VBN; BirdLife Partner in the Netherlands), and round off the Fellowship programme by spending the last two months working from and being based at the CMS Secretariat.

Beyond the development of the AEMLAP and its adoption at the CMS 11th Conference of Parties (COP11), the implementation of this Action Plan has required an advocacy strategy. This strategy included the development of specific tools (like the species filter, embedded within the BirdLife

DataZone, which allows regional and national filtering of AEMLAP species in range; <http://www.birdlife.org/datazone/species/search>), as well as a number of public presentations explaining and encouraging involvement in AEMLAP at the University of the Third Age in Cambridge (U3AC), BirdLife Global Secretariat, British Trust for Ornithology (BTO), African Bird Club (ABC; presentation available online at <https://youtube/56Ljbh31ds4>) and the RSPB. Residing in the UK during the Fellowship made much of this possible.

The Darwin Fellowship is a programme aimed at supporting capacity development for those from developing countries. My Fellowship experience was positive and the programme was

a success. I am now undertaking a Postdoctoral Fellowship at the Percy FitzPatrick Institute of African Ornithology at the University of Cape Town in South Africa, investigating migration connectivity in intra-African migratory landbirds across western, eastern and southern Africa. Having contributed to the development and implementation of the AEMLAP to its present stage, I am now able to apply these skills and experiences to other aspects of migratory bird conservation in Africa.

For more information on Dr. Samuel Temidayo Osinubi's fellowship [click here](#) or contact Dr Danae Sheehan, danae.sheehan@rspb.org.uk

Barn Swallow, *Hirundo rustica*, one of the AEMLAP-listed species). Credit Samuel Temidayo Osinubi.



La Primavera,
Mexico

Credit J Lovett

Lights, Camera, Action – Documentary on wildlife corridors in the La Primavera Biosphere Reserve, Mexico

Darwin Fellow Karina Aguilar, has returned to Mexico, to work with the NGO Conecta Bosques. Together, Karina and Conecta Bosques are publicising the need for wildlife corridors to connect the La Primavera Biosphere Reserves with the surrounding forests.

Forest connections are being threatened by a new highway that is being built around the reserve. The world renowned film maker, Manfred Meiners, has produced a captivating documentary that promotes wildlife corridors being built across this new highway. The film featured Karina and the work she undertook whilst a Darwin Fellow with the Wildland Research Institute based in the School of Geography, University of Leeds. Watch out for the film that will feature in a forthcoming massive open online course (MOOC) on social-ecological systems that is being prepared by the University of Leeds. It will be broadcast on 8 February 2016.

If you are interested to find out more about Conecta Bosques, their Facebook site can be found here: <https://es-es.facebook.com/conectabosques>.

A preview of the biological corridors film, with Karina, can be found through the following link: <https://www.youtube.com/watch?v=6vu0VUId1gs>

For more information on Karina Aguilar Vizcaino's fellowship [click here](#) or contact Jon Lovett, j.lovet@leeds.ac.uk or jonclovett@gmail.com



Karina Aguilar Vizcaino

Seychelles flycatcher,
known as 'Vev' locally
Credit W Meinderts



Lasting legacy - 'Investing in island biodiversity: restoring the Seychelles Paradise Flycatcher'

In 2008, a Darwin project supported the introduction of the Critically Endangered Seychelles paradise flycatcher *Terpsiphone corvina* (known locally as Vev) to Denis Island, Seychelles. Historically, flycatchers were restricted to one small island, La Digue. Through the project, land was restored and 23 Vev were transferred from La Digue to Denis Island by helicopter in November 2008. Ever since, the new population has been monitored.

The Vev have set up territories and are breeding in areas of habitat rehabilitated under the project. As a result, the population on Denis has nearly tripled since being introduced: at least 65 individuals were observed during the annual census in November 2014.

A lasting legacy from this project is the eradication of the common myna *Acridotheres tristis* from Denis Island, undertaken by Green Island Foundation and Denis Island Management. During the intensive monitoring of the new Vev population it was observed that many breeding

attempts were failing due to depredation of the eggs and nestlings by the common myna. A myna eradication programme began in 2010 and the last myna was removed mid-2015.

A second lasting legacy from this project is that the Project Officer, (Rachel Bristol) went on to do a PhD on conservation of the Vev supervised by project leader, Jim Groombridge, DICE, University of Kent. The PhD research included a molecular phylogeny of the *Terpsiphone* genus, population genetics of the Vev, an assessment of the population productivity and the initial genetic effects of the conservation introductions to Denis. Two publications (in MPE and MolEcol journals) have resulted from this PhD research and two more are expected that will inform future Vev conservation re-instruction in the future.

For more information on project 15-009 [click here](#) or contact Jim Groombridge, j.groombridge@kent.ac.uk

Bwindi Impenetrable National Park, one of the remaining natural habitats for mountain gorillas Credit L King



Newsletter contacts

The Darwin Initiative Secretariat (Defra)

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

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