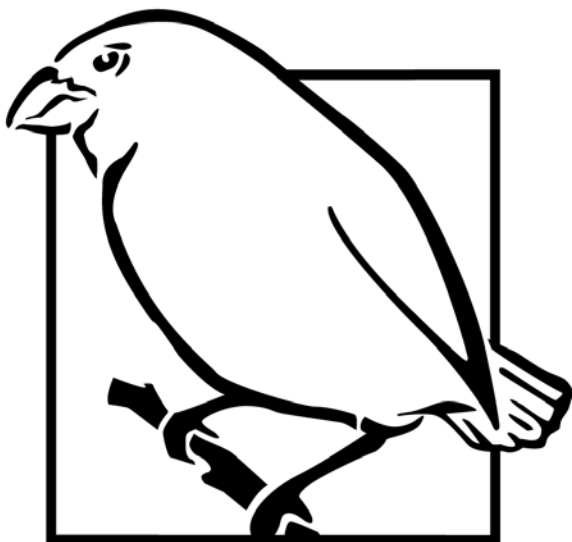


Newsletter

December 2019

Student recording vegetation data for forest bird survey, Credit: Fauna Australis



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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 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
- the Nagoya Protocol on Access and Benefit-Sharing (ABS)
- the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)
- the Ramsar Convention on Wetlands
- the Convention on the Conservation of Migratory Species of Wild Animals (CMS)
- the Convention on Climate Change (CCC)



darwininitiative.org.uk



Magdalena Island with lighthouse,
Credit: Mike Bingham

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*Daudi the farmer and livestock herder from Rombo,
Credit: Barbara Chabbaga, AB Consultants*

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)

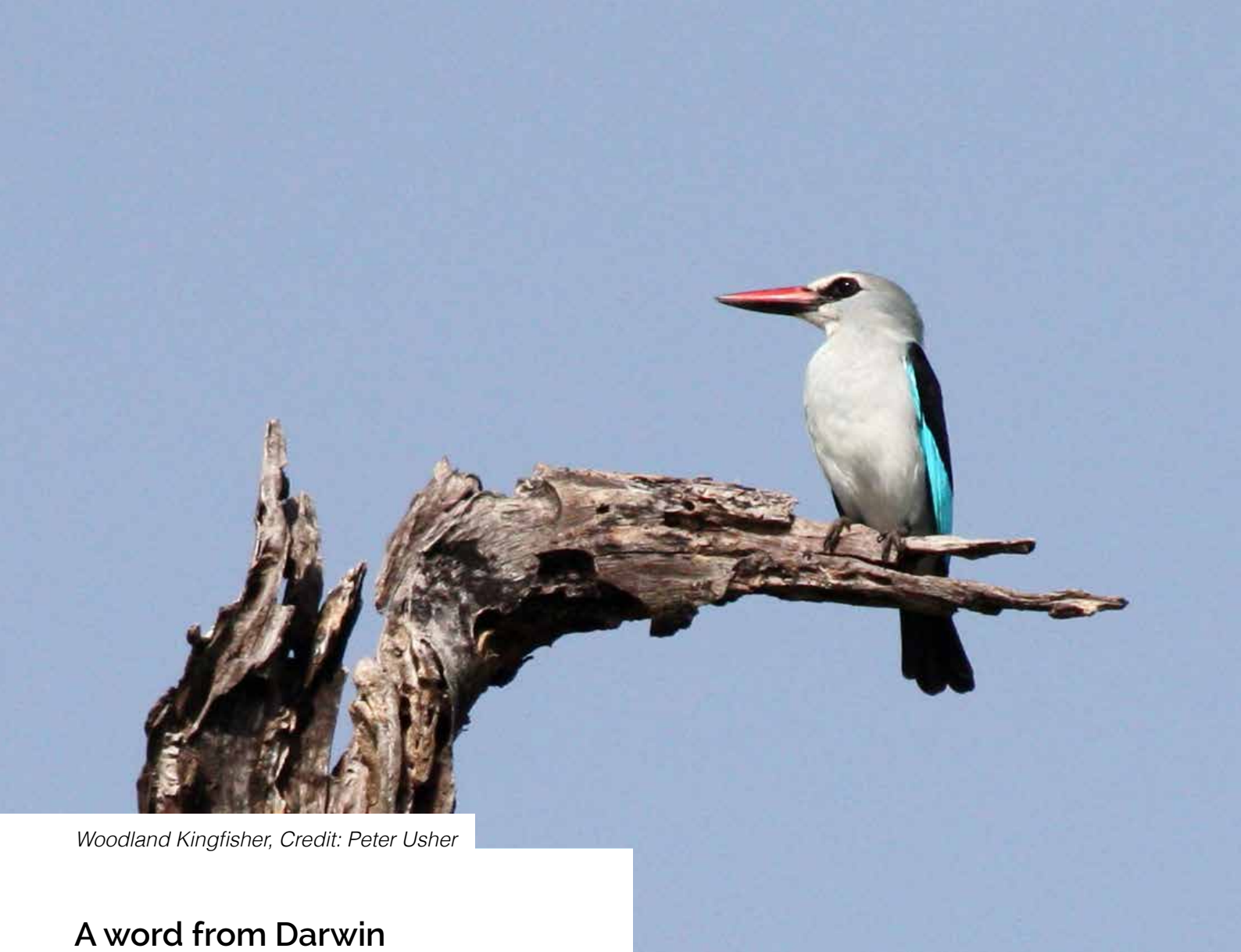
For further details about current and completed Darwin Initiative projects, including their final application forms, please visit darwininitiative.org.uk

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 secures continued Government funding.



Woodland Kingfisher, Credit: Peter Usher

A word from Darwin

Securing biodiversity whilst improving local livelihoods is the core aim of many Darwin Initiative funded projects. The health of ecosystems underpins the wellbeing of people across the globe. Many of these communities have rich cultures and traditions and rely on a handful of unique species for their nutritional and healthcare needs, with other species being held in high regard due to their spiritual or cultural importance. Unfortunately, due to our changing climate, overexploitation, and changes in land use, many of these species are being threatened with extinction.

This pressure has often resulted in local communities turning to unsustainable practices to continue to uphold cultural and traditional norms or as a last-ditch effort to support their families and households.

In this edition of the newsletter we hear from projects that are promoting conservation and sustainable livelihoods whilst respecting the beliefs and needs of local community members.

On 12 October International Environment Minister Zac Goldsmith announced an increase of the funding to the Darwin Initiative in an effort to protect international biodiversity. The funding for the Initiative is due to triple to £30m per year. We are thrilled to confirm this extra funding which will help continue our efforts to protect people and planet! The official press release can be found [here](#).



Farmers sorting chilli before sales in Harakisa Farm, Credit: Jennifer Adero

Balancing water services for development and biodiversity in the Tana-Delta

The Tana River Delta is the second most important estuarine and deltaic ecosystem in Eastern Africa. The Delta has been dedicated as a Ramsar site, Key Biodiversity Area and Important Bird Area, it forms the northern limit of the Eastern Arc Mountains and Coastal Forests biodiversity hotspot, and is a proposed World Heritage Site. The area is home to a plethora of unique and endangered species including the endemic Tana River colobus and internationally important populations of a number of water bird and plant species.

Over the years, the Delta has faced a number of challenges, including declining water quantity and quality, increasing human and livestock populations, resource use conflicts, and climate change. Nature Kenya is working alongside RSPB and other Kenyan partners to implement Darwin project “Balancing water services for development and biodiversity in the Tana-Delta”. Communities are the main focus of this project which ensures that local cultures and traditions are respected.

“ Traditionally, the Pokomo and other resident communities relied on the forests for medicine but recently there has been a significant scramble for land and other resources

Pokomo farmers are the main inhabitants of the Delta, and are pastoralists who practice flood recession farming. Traditionally, the Pokomo and other resident communities relied on the forests for medicine but recently there has been a significant scramble for land and other resources by large scale investors and immigrating communities. The changes in land use has put pressure on forests and bush lands. More areas of forest are being opened for farming and other human activities including settlement, and in the process, many of the vital tree species with medicinal value are being eliminated.

Through this project, Nature Kenya has worked with communities and County Governments of Tana River and Lamu to create the Tana Delta Indigenous and Community Conserved Area. A management plan has been developed with the aim of securing biodiversity and community livelihoods. In addition to the establishment of the management plan, 45 villages have come together to form the Village Natural Resource and Land Use committees.

To deal with high poverty levels, the project supported sustainable income generating activities encouraging the farming of goats and honey production. 42 pastoralists have started buying, fattening and selling goats at a profit. Traditionally, pastoralist and farming communities have used honey for nutritional and medicinal purposes, but the collection of honey resulted in forest destruction through the use of fire. These methods ultimately lowered the honey quality and killed bees, compromising future harvest and removing the bees from the ecosystem.





Packaged and branded Tana Delta Honey, Credit: Odera George

Through the introduction of more sustainable hives (primarily owned by women) the money earned through beekeeping has enabled households to afford food and medicine.

Ozi village is located in the lower reaches of the Tana Delta next to the Indian Ocean. Over the years, due to climate change and sea level rise, the river has experienced significant sea water intrusion. When farmers are unable to produce food they turn to destruction of the nearby mangrove forest to support their families. Working with local agricultural extension officers the Darwin project supported 128 farmers with rice seed varieties that have greater salt tolerance. The first 36 farmers have reported an average harvest of 1.4 tonnes per acre representing 55% and 99% increase in household incomes for Male and Female Headed Households respectively at farm gate prices.

In the Harakisa Community Development Group the project in collaboration with Equator Kenya Limited has supported 30 farmers grow bird's eye chillies. Since August 2019 farmers harvested 971kg of chilli earning 53,381 Kenyan shilling (KSh) (£399). At full production, each household is expected to earn KSh 180,000 (£1,346) annually. Farming of the chillies has reduced the number of human wildlife conflict incidents as the capsicum content renders it inedible for wild animals and livestock. As a result, women in the community have more time to engage in other activities, not having to worry about guarding their crops.

The sales from chillies have provided additional income for households and, due to their high value and three-year lifespan, removes the need to open natural areas for crop production.

The project has significantly improved the lives of local women through supplying 850 energy saving stoves. Initial surveys showed that the stoves reduced fuel wood use by 47% while reducing the time spent for preparing meals significantly. This ensures that women are able to find additional free time to engage in meaningful economic activities while also reducing fuel wood collection thereby promoting forest conservation. Traditionally, particularly among the pastoral communities, women are only allowed to own small stock like chicken which they can freely sell without restrictions from their spouses. In an effort to promote greater economic independence, the project also focused on female led chicken rearing activities.

The project has trained local monitors who carry out detailed biodiversity monitoring, water fowl and common bird monitoring and submit data to the National Museums of Kenya that informs annual Key Biodiversity Areas Status and Trends Reports.

For more information on project 24-013, please click [here](#).



Bee-keeping programme in South-west Tai
Credit: Rainforest Alliance

Respecting tradition through community-led conservation in the Ivorian Rainforest

Tai National Park in Ivory Coast is one of the last remaining areas of the vast rainforest that once stretched from Guinea to Togo. A UNESCO World Heritage Site, the park is home to stunning tropical flora and many endangered species. But human activities are rapidly encroaching on the park, putting the forest and its iconic wildlife at risk. In response to these threats, cocoa farmers from the neighbouring villages have banded together to develop a community-led landscape action plan.

Ivory Coast produces 30% of the world's cocoa, most of which is produced by smallholders living in severe poverty. The struggle to make a living is getting increasingly tougher as farmers grapple with aging trees, low soil fertility, and climate change. In Tai, this pressure is pushing some farmers to expand into the national park, cutting down pristine rainforest to make room for new cropland.

At the same time, hunting for "bushmeat" has hit crisis point. Meat from wild animals - including endangered species - has long provided an important source of supplementary income for farmers across West Africa. But as increased demand drives a massive surge in the trade, commercial poachers are moving into protected areas - with dire consequences for Tai's chimpanzees.

“ These methods are not only “climate-smart”, helping farmers increase resilience to changing weather, but also support habitat conservation by restoring degraded ecosystems and boosting productivity on existing farmland - thereby removing the impetus to expand into nearby forests ”

With financial support from the Darwin Initiative, and on-the-ground guidance from the Rainforest Alliance, six cocoa farming communities on the park's southern edge have united to defend the forest.

Over the past three years, more than 500 farmers have participated in field trainings in sustainable agricultural practices such as agroforestry and integrated pest management. These methods are not only “climate-smart,” helping farmers increase resilience to changing weather, but also support habitat conservation by restoring degraded ecosystems and boosting productivity on existing farmland - thereby removing the impetus to expand into nearby forests.



Chicken rearing programme in South-west Tai, Credit: Rainforest Alliance

Representatives of the neighbouring Kroumen and Mossi tribes - together with local authorities, the forest management agency and Olam International - formed a Landscape Management Board (LMB). In an effort to advance conservation through sustainable livelihoods, more than 80 farmers are now participating in a successful chicken-rearing and bee-keeping programme which provides participating households with an alternative to bushmeat as both a source of income and protein.

“
The Landscape Management Board’s efforts to stop habitat destruction have also been mindful of the importance of local plants in traditional medicine and spiritual practices
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The LMB’s efforts to stop habitat destruction have also been mindful of the importance of local plants in traditional medicine and spiritual practices. While threatened species used for these purposes - such as *Salvadora persica*, the famous “toothbrush plant” - need to be protected from over-exploitation, blanket bans are ineffective. Instead, the LMB has been raising awareness of the need to manage natural resources more sustainably.

For Thé Laurent Gnaoue, a local farmer who helped develop the landscape action plan, this community approach has been critical. Culture and tradition have “a huge impact” on any decisions taken by the local villages, notes Gnaoue. The strength of the action plan, he explains, is that it brings cohesion between conservation goals and cultural beliefs and traditions.

For more information on project 24-021, please click [here](#).



*A group discussion held in Gimba
Credit: Sharon Chesire, AB Consultants*

Heritage, hassle and hope: the conflicting realities of communities living with wildlife in Kenya

Daudi is a livestock and crop farmer from Rombo, Kajiado county. He has 11 children in school and at the time of our visit he had lost all his 7 acres of watermelon and pumpkins to elephants. Many of his cattle died in the recent drought. He is unsure of what the future holds, and yet he afforded us a smile.

Think of the most disadvantaged community you know. They are most probably struggling with their finances, constantly striving to make ends meet and to put food on the table. Then imagine that what little they do have being destroyed by wild animals. Unfortunately, this is the stark reality for the thousands of households that live with wildlife across the world. These communities face unique risks that can have critical livelihood and financial implications.

The Kenyan chapter of the Darwin funded “Livelihoods Insurance for Elephants” (LIFE) project, led by AB consultants and the International Institute for Environment and Development (IIED), has been closely working with communities in Taita Taveta and Kajiado counties.

Human wildlife conflict is rife in these areas and is often characterised by negative perceptions by the community towards wildlife and in extreme cases, retaliatory killings. Having interacted with these communities, it becomes apparently clear why they react the way that they do. Daudi encapsulated the tough reality faced by these communities who are often torn between the need to conserve and preserve wildlife and the fact that they experience the consequences of their negative interaction.

The aim of the project has been to explore whether insurance (particularly microinsurance) can be used as a way to mitigate the financial risks faced by these communities. It is with the hope that by securing the livelihoods of those affected by the conflict, a more peaceable coexistence can be reached.

“
Daudi encapsulated the tough reality faced by these communities; who are often torn between the need to conserve and preserve wildlife and the fact that they experience the consequences of their negative interaction
”



Barbara Chabbaga listening to Daudi, a resident of Rombo, Credit: Zipporah Muchoki, AB Consultants

“

Community buy-in was encouraged through the use of locals as research assistants – this resulted in unexpectedly positive response from the wider community

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A young male elephant, Credit: Sharon Chesire, AB Consultants

The communities we have worked with have been part of the co-creation principle held firmly in microinsurance. Co-creation started at the project's inception through the formation of partnerships with community-based organisations who became our liaison with the local communities. During the market research, the communities actively participated in the design of the scheme by suggesting amounts that they are willing to pay as premium once the scheme was up and running. Furthermore, they suggested what they perceive as trusted networks that the scheme should consider when reaching the populace.

This insight from the communities has been crucial for the product design phase as it has formed the baseline for the actuarial process. It was also observed that communities were more responsive to projects that involved them directly. Community buy-in was encouraged through the use of locals as research assistants – this resulted in unexpectedly positive response from the wider community. The pilot scheme is expected to begin in January 2020 with prototype testing taking the designed product back to the community and through their input, a final design will be made before official rollout.

The LIFE project has been a learning process for the team at AB and has shown what the success of this project will mean for the communities. We had the opportunity to spearhead and organise “The Consultative Forum on Innovative Human Wildlife Conflict Compensation Schemes” with funding from the Darwin Initiative. For the first time government, the private sector through the insurance industry, NGOs and most importantly the communities were brought together to discuss matters of HWC.

Thanks to the forum, a taskforce was launched by the Cabinet Secretary of the Ministry of Tourism and Wildlife to address HWC at a national scale. We have also seen a lot of interest from other HWC-affected countries in Africa who are interested in learning from this project to possibly implement in their own countries. Through the successes of this project renewed hope has been brought forth, showing that one day, people like Daudi will smile, not just with hope but with the certainty that their livelihoods are secure.

For more information on project 25-004, please click [here](#).



All female focus group discussion in the CBFM village of Mchakama, Credit: Lasima Nzao

Community forests in Tanzania: can they contribute to gender equity?

Kilwa Masoko is located approximately five hours directly south on the main road from Dar es Salaam. Approximately an hour away, you turn east and begin a gradual descent to the Indian Ocean. The scent of the sea hangs heavy in the air and the road becomes dotted with the occasional flag, each one raised indicating a catch for sale. Kilwa Masoko is the home of the non-governmental organisation, Mpingo Conservation and Development Initiative (MCDI) which was established in 2004 to promote forest conservation through community-based forest management.

The organisation's name is indicative of its origin; the mpingo (*Dalbergia melanoxylon*) or African blackwood is native to this region and is one of the most valuable timbers in the world. Its wood is prized for the creation of woodwind instruments but has been severely depleted due to unsustainable extraction, which sparked the establishment of the MCDI. Although mpingo is a species of particular interest to MCDI's work, the southern part of Tanzania also houses a significant portion of the country's forest and woodland ecosystems, the majority of which are located on village lands. Furthermore, it is one of the most sparsely populated and economically-poor areas. These characteristics combine to create an area ripe for the conservation and development initiatives promoted by the MCDI.

“ Although mpingo is a species of particular interest to MCDI's work, the southern part of Tanzania also houses a significant portion of the country's forest and woodland ecosystems, the majority of which are located on village lands ”

Community-based forest management (CBFM) had been present in the country prior to the MCDI's formation, driven in large part by external donors, but embedded and strongly supported by the Tanzanian government. The foundation of CBFM was born in central Tanzania near Iringa where areas that had been heavily deforested were legally-transferred to community-management through the Forest Act No. 14. In contrast, the CBFM areas formed in partnership with MCDI have been more selectively degraded whilst retaining the potential to generate revenue for communities if managed sustainably.

The Darwin Initiative RESPeCT project (realising equitable, sustainable and profitable community-based forestry in Tanzania), was launched in May 2018 and showcases a collaborative research effort between the Royal Botanic Garden Edinburgh, MCDI, and Allegheny College.



All female focus group discussion in the CBFM village of Mchakama, Credit: Lasima Nzao

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Men and women differ in their use of natural resources with growing evidence that greater gender equity in the management of a natural resource can lead to better conservation outcomes
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The main project focus is on the provision of empirical evidence of the socio-ecological contributions that CBFM makes to the communities in which they are formed. Prior research has indicated the importance of differentiating people's experience of CBFM. For example, the work of Lund and Saito-Jensen describe the tendency for CBFM to mirror existing inequalities with the bulk of financial benefits being captured by elites. Similarly, the work of Bina Agarwal amongst others demonstrate the importance of paying attention to gender.

Men and women differ in their use of natural resources with growing evidence that greater gender equity in the management of a natural resource can lead to better conservation outcomes.

The RESPeCT project has been tracking gender issues and assessing the potential role that CBFM plays in attaining a more equitable playing field. In particular, we utilise a quasi-experimental design and have matched ten selected villages where CBFM is present with non-CBFM sites using relevant socio-demographic and environmental characteristics. Our preliminary results suggest that women are faring less well than men regardless of the type of governance - that is, CBFM has no effect.

Women were shown to have significantly lower levels of hope and felt less confident than men in making decisions that impact their lives (agency). Women have been better represented in local government since the 35% female constituency was mandated in 1982, but the change has been slow and representation does not necessarily correlate with participation. What appears clear is that if CBFM is to contribute to gender equity, there must be an explicit incorporation of these objectives into its implementation and management practices.

For more information on project 25-019, please click [here](#).



Necklaces made from dried Eastern hawthorn (*Crataegus orientalis*), Credit: NH NGO

Empowering communities to safeguard the future of wild harvested fruits and nuts of the South Caucasus

Bordering Eastern Europe and Western Asia, Georgia and Armenia are in the southern region of the Caucasus Mountains. The region is widely recognised as one of the world's top Biodiversity Hotspots, which is home to the highest level of biodiversity per square kilometre within the temperate region. Together with this remarkable biological diversity, the region is also known for its rich diversity of cultures, with over 20 ethnic communities calling the South Caucasus their home.

“ Recognised as one of the centres of early crop domestication, the link between the people who live here and the plants found growing around them spans many centuries

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Recognised as one of the centres of early crop domestication, the link between the people who live here and the plants found growing around them spans many centuries. In terms of fruits and nuts, their importance can be found literally carved in stone on ancient buildings and monasteries. Unfortunately, there are multiple threats to wild populations of fruits and nuts in the region, particularly habitat loss through logging, overharvesting and grazing from local livestock.

As with all Millennium Seed Bank Partnership projects, a close collaboration with in-country partners is key to ensuring a positive and lasting impact on the ground. This project follows the same basic model, involving long-term partners, the National Botanical Garden of Georgia, the Institute of Botany of Ilia State University in Georgia, and Nature Heritage NGO in Armenia, with the aim of safeguarding wild harvested fruit and nut species of the South Caucasus. Local partners are not only experts in their flora, but also of their people, culture and needs. In Georgia, for example, one of the species the project partners wanted to focus on is the Caucasian bladdernut tree (*Staphylea colchica*). Flower buds are collected and pickled by locals to be made into Jonjoli, an authentic side dish in Georgia.

Unfortunately, as the buds are picked, this leads to a lowered chance of regeneration and erosion of genetic diversity in wild populations. Similarly, in Armenia, the project partners wanted to focus on the Eastern hawthorn (*Crataegus orientalis*), which is very popular with Armenians who eat the fruits fresh, make jams, and dry the fruits to make necklaces to sell during festivals.

In order to alleviate threats from overharvesting and grazing of these and other species, we had to develop a close working relationship with key members of the Khachik community in Armenia and the Mchadijvari community in Georgia. Project partners in both countries engaged with key collectors within their target communities through distributing project leaflets and establishing community-led steering committees. Through these activities, the project has encouraged buy-in from the community and led to collectors such as Jambuli Mighdiseli from the Mchadijvari community in Georgia who has championed the project to other collectors and even on the local news.

Our Armenian project partners also found an overwhelming willingness of community members coming to share knowledge of their harvests and showcase examples of the products that they've made. So much so that the project team members were forced to stop working mid-way through the consultations to give time for their stomachs to digest! This resulted in the development of a fruit-growing plot for species tailored to the communities' needs. The plot will help alleviate pressures of wild harvesting whilst providing produce that is of use to the whole community.



MSc student from Georgia conducting fieldwork, Credit: T. Shetekauri

Partners have trained community members on ways of keeping their fruit trees healthy and productive for many years. In Georgia, the community and partners planted rare and threatened species in the local school yard, including the Caucasian bladder nut tree.

The inclusion of the next generation in the project activities is integral if we are to ensure the future of the unique biodiversity of the South Caucasus. As well as engaging with local schools, the project supports Armenian and Georgian MSc students, who trained both in their own countries and at RBG Kew to be the next generation of botanists. Through their involvement the next generation will hopefully go on to champion biological conservation projects like ours to their peers and beyond.

For further information on project 25-017, please click [here](#).



Project team member handing out leaflets to local smallholder, Credit: NBGG



School children birding around Rwalo hills, Credit: Joseph Wajina

The Bird Custodians: tracking the conservation journey in Yala Swamp with birders

In January 2015, a team of novice birders from the local community initiated a monthly bird walk deep within Yala swamp, one of Kenya's key Biodiversity Areas and a proposed Ramsar site. One year later, a total of 20 individuals have been trained in wildlife guiding and nine of them further trained in ornithology through Darwin Initiative funding. Equipped with the main birding essentials coupled with biodiversity survey techniques, identification, passion, dedication and a desire to learn - the birders have never looked back.

Joseph Wajina, Chairperson of the Yala Community Ecotourism Organisation, states, "as a predominantly fishing and farming community, birds have been of significance to us since time immemorial. We have quite a number of socio-cultural practices and beliefs associated with birds and the phenomenal bird migration".

Ibrahim Onyango, one of the acclaimed tour guides chips in, "for instance, the fishermen use the hourly successive cries of the White-Winged Warblers to count the hours until it is time for them to go and cast nets in the lake. While sailing, fishermen rely on the loud ringing cry of the African Fish Eagle to detect a change in the direction of wind, meaning time for them to adjust their sails within a span of five minutes. When waders move from the shorelines deeper into the lake in search of fish, it's an indicator that water is polluted and fish have also moved deeper into the lake in search for dissolved oxygen. Presence of the Great White Pelicans along the

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Over time, we have cultivated interest in birding, acquiring information on birds, bird identification and best birding hot spots

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lake shoreline indicates that it is a breeding season for haplochromine fish species, signaling to fishermen to keep away from the breeding zones".

Martin Ouma, another talented birder picks up, "farmers predict the approach of rain with the arrival of flocks of African Open-billed Storks, Abdim's Storks and Glossy Ibis and begin to cultivate the fields in preparation for the planting season. The sighting of Yellow-billed Oxpeckers among herds of livestock alerts the farmer that it's time to take the cattle to a cattle dip for tick control. On a day to day basis, the repeated calls of the Red-eyed and Ring-necked Doves signify day break and time for children to go to school".

Wajina continues, "Over time, we have cultivated interest in birding, acquiring information on birds, bird identification and best birding hot spots. Due to our vast experience with birds, we are involved in birds mapping through the Kenya Bird Map (an online site developed for mapping birds' distribution in Kenya).



Adbim's stork, Credit: Peter Usher

We are also engaged in bird ringing projects in collaboration with the National Museums of Kenya and privileged to work with distinguished researchers from higher learning academic institutions - our visitors are no ordinary guests”, he chuckles.

Alfred Ayiro, a tour guide who is passionate about formation of Wildlife Clubs in schools explains, “our school mentorship programme started with four primary schools and now we work with over 60 schools. Using binoculars just fascinates children, we used to organise birding once a month which we have since doubled. An increase in demand for birding from the school children, has meant that we may soon be doing birding every weekend”.

“We have established a community bird monitoring network contributing useful information for compiling the Key Biodiversity Areas Annual Status and Trends Report. Within the lower reaches of the swamp, we have the Busia Anti-poisoning Team who are strong advocates against bird poisoning. They are at the frontline in raising alarm when bird habitats are destroyed and taking action to safeguard birds and their habitats. For us birders, the conservation of birds and their habitat is a top priority”, concludes Wajina. The guides continue to carry out lots of community sensitisation on the importance of birds for community members to embrace the protection of birds and their habitats. At times there is even hostility with members of the community thinking that their aim of advocating for conservation is to hedge them out of deriving their livelihoods from the swamp in favor of birds and wild animals.

During one of the early morning birding sessions, one of the guides was asked “Young man, don't you have anything else to do? People are busy cultivating land while all you do is aimlessly walk around with this tourist stuff (meaning binoculars) dangling on your neck”. It has taken lots of awareness raising, dialogue (both formal and informal) and consistent advocacy to change the narrative.

“
Community perceptions are gradually changing when people see that the guides are able to take care of their young families through tour guide earnings
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Community perceptions are gradually changing when people see that the guides are able to take care of their young families through tour guide earnings. The project is on track, especially with the endorsement of the Yala swamp land use plan in July 2019 by Governors of Siaya and Busia Counties and in September by H.E. the Rt. Hon. Raila Odinga (Prime Minister, Republic of Kenya 2008-2013). The land use plan recommends creation of Indigenous and Community Conservation Areas to promote ecotourism and biodiversity protection. There is hope for birds in Yala Swamp.

For more information on project 26-003, please click [here](#).



Chia Fish Conservation Committee members, RIPPLE and fisheries staff celebrating their partnership, Credit: RIPPLE Africa

Communities working together to make sure that there are fish for tomorrow in Lake Malawi

The Chambo fish (*Oreochromis sp*) has long been one of the most popular fish caught and eaten in Malawi and is therefore very sought after. Unfortunately, the high population growth in Malawi has put the species under such pressure that three out of the four species of Chambo are now classified by the IUCN as Critically Endangered. Many other species are also in decline and fishers have resorted to using longer and longer nets, many made from mosquito nets donated for malaria prevention. These nets can catch thousands of baby fish at a time in the shallow breeding areas, which greatly impacts population growth.

This is a tragedy for the world's most biodiverse freshwater lake and previous attempts to solve the problem have proved unsuccessful...until now. Ripple Africa, a UK based charity, has worked in Malawi for the last 16 years and ensures that all of their projects directly involve local stakeholders. By engaging with key people at the start of a project and involving them in the planning, continued interest and commitment in the project is encouraged. Through effective communication, stakeholders are made aware of the financial, nutritional and ecological benefits that come from protecting and conserving the fish.

Ripple Africa's 'Fish for Tomorrow' conservation project was first introduced in Nkhata Bay District in 2012 and expanded in 2016 to include Nkhotakota thanks to funding from the Darwin Initiative.

To date there are over 2,500 local volunteers protecting fish species along Lake Malawi's shoreline, which is possible only through true partnership between Malawi's Department of Fisheries, Ripple Africa, and local communities.

In an effort to protect the Chambo, each district develops fish conservation bylaws. Through support from Ripple Africa and the District Fisheries staff, community conservation committees are established and these bylaws are put in place to protect key breeding areas, enforce seasonal fishing practices and confiscate illegal fishing gear. Any illegal fishing is fined and the money goes to the community conservation groups to fund future activities.

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By involving and gaining the support of all those who rely on fish and helping them to understand the importance of conservation, the problem is now being effectively tackled

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By involving and gaining the support of all those who rely on fish and helping them to understand the importance of conservation, the problem is now being effectively tackled. Rather than enforcement being a government responsibility, community members are now confiscating illegal nets from their fellow fishermen to protect the juvenile fish. Instead of catching thousands of smaller fish which will feed a family for only one meal, fishermen are now catching much larger fish which provide greater financial and nutritional benefits.

“

Before the project, I caught only a few small Chambo but now I am catching more and they are big, big fish. I make more money and can now pay school fees for my children. I am very happy!

”

- Custom Banda, fisherman

Fishers understand their role in conservation and have become the solution to their problem.

Custom Banda is a fisherman in Kambindingu in Nkhotakota District. Since the start of the project, he has seen more small fish in the lagoon. The increase in the number of fish can be contributed to the efforts of the community who ensure that no fishing takes place in the protected breeding ground. As a result, fishers are now able to catch larger Chambo and are also seeing

the return of Mpsa (*Opsaridium microlepis*), a species which had previously disappeared from their part of the lake.

'Before the project, I caught only a few small Chambo but now I am catching more and they are big, big fish. I make more money and can now pay school fees for my children. I am very happy!'

Through the project, Ripple Africa are developing the capacity of local people along the lakeshore to become custodians of the lake for themselves and future generations. Those who rely most on the lake are the ones who will be making sure that there will be fish for tomorrow's generations in Lake Malawi. As you can see from the enthusiasm of the committee at Chia Lagoon, one of Malawi's largest Chambo breeding areas, they love being in control of their fisheries and their futures!

For more information on project 25-009, please click [here](#).



Custom Banda (left) and other community members, Credit: RIPPLE Africa



St Helena's Darwin project cloud forest team, Credit: Sasha Bargo

Cloud forest restoration in the South Atlantic – Meet the team!

DPLUS099 is focused on saving the fragments of relict endemic cloud forest found within the Peaks National Park. The park occupies the central ridge of St Helena, a small (120km²) UK overseas territory sitting midway between Brazil and Angola in the South Atlantic Ocean. The island's resident community is also small, and from this population we have gathered our team for this Darwin project.

The majority of the team lives in Levelwood, a remote (for St Helena) settlement on the eastern slopes of the national park. Three of the project team play league cricket for the Levelwood Allstarz, who hold the island's championship title.

Ross Henry, 31, is the youngest member of the project team but despite his age is one of the most experienced. Prior to his involvement in the project Ross worked as part of the St Helena Government national park team for seven years. From his initial post as a trainee conservation worker he has progressed and is now Senior Conservation Technician. He explains, "I joined the project in order to expand my knowledge and skills and pass my experience on to others."

Perry Leo is the Peaks endemic plant nursery's Production Manager. He works in close collaboration with the project team. His role is essential in propagating plants for the restoration work, he is responsible for producing enough plants at the right time to support the project.

Wayne Leo is the newest member of the team and is currently learning the common and "tongue-twisting" botanical names for the twenty endemic flowering plants, ferns and numerous invasive species that the team deal with.

He joined the project "to learn about the Peaks plants from the roots up." Wayne also looks forward to "teaching others what I've learned and promoting the importance of the Peaks to everyone I talk to."

Ross, Perry and Wayne all have young children and want to "conserve the Peaks habitats and endemics for future generations, so that they can enjoy it as we have."

Donna Duncan is a local St Helenian who recently returned to the island after living in the UK for a number of years. She believes that "the endemic plants form an important part of the island's identity and something with which islanders identify." Donna joined the project team as she wanted to "give something back after being away for so long."

Mike Johnson, originally from the UK, is married to a St Helenian and now considers the island his home. He has a background in forestry and conservation and believes that the project offered "the ideal opportunity to continue working in conservation, which I am passionate about, while learning about the unique aspects of the Peaks."

Andrew Darlow, also from the UK, has spent many years working with the endemic plants of St Helena and exclusively on the Peaks for the past four years. "The project is important to the community as it highlights the cloud forest and recognizes the importance of this habitat in sustainable water capture for the island and as a key asset for the local tourism industry. It is a privilege to work in a beautiful environment with really unique and rare native biodiversity."

For more information on project DPLUS099, please click [here](#).



*Kodkod cat with radio collar,
Credit: Fauna Australis*

Capacity building for temperate rainforest biodiversity conservation in Chile

Following research and training opportunities supported by the Darwin Initiative in 2006, a group of Chilean scientists are teaching new generations of conservation professionals in the southern temperate rainforest.

The project which ran from 2006 to 2009 set out to establish local biodiversity research with practical forest conservation activities that would improve knowledge and local capacity to protect Chilean native forests and the unique wildlife they contain.

In those early days, through pioneering the use of camera traps the project team revealed the habits of kodkod cats, pumas, pudu, as well as livestock and introduced species activity for the first time. Young researcher, Nicolas Gálvez, the project administrator, persevered with analogue cameras until advances in technology resulted in the introduction of digital photography. Unknown to the team at the time, the project was set to become the longest running wildlife monitoring programme in Chile. Now Dr Gálvez, Nico has teamed up now with Dr Tomas Ibarra and Dr Tomas Altamirano on a long-term monitoring project focused on cavity nesting forest birds and raptors.

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Unknown to the team at the time, the project was set to become the longest running wildlife monitoring programme in Chile

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The current project has three main research points: the ecology of large carnivores and their coexistence with the local community; the ecological relationships between cavity nesting species and raptors in old-growth forests; and the assessment of land use change on biodiversity in the region. A transversal theme running through all the work is the social context for biodiversity, to include how drivers of land use change, such as development and climate change are shaping the future outlook for endemic wildlife.

Twelve years on, the team that was brought together by the Darwin Initiative is based in a new department of the Pontifical Catholic University of Chile (PUC), the Centre for Local Development.

In addition to research, the team is hosting a semester for a successful study-abroad programme in socio-ecological sustainability for undergraduates from the University of California.

The original site of the field centre remains the local base for field studies conducted by Fauna Australis and is open to the public, and hosts residential meetings and educational experiences. Known as the “Kodkod meeting place”, the centre has been instrumental in introducing concepts of certified sustainable tourism in Chile.

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With hindsight, it is now clear that the Darwin project was an essential catalyst for investment in ecological science in the area

Over time, improvements have been made to the teaching and accommodation facilities in an effort to offer education and training in forest ecology and wildlife conservation to local and international groups.

The aims of the original project, led from Scotland by Alison Hester and Jerry Laker at the then Macaulay Institute in Aberdeen, and David Macdonald of WildCRU, Oxford University, allowed us to start a series of new projects that would continue long after the project was completed.

The legacy has been far-reaching, and longer-lasting than originally expected. More than 170 students from PUC MSc Natural Resources programme have participated in a fieldwork training course since 2006. With hindsight, it is now clear that the Darwin project was an essential catalyst for investment in ecological science in the area.

Such an investment has allowed us to contribute to larger PUC initiatives like the Interdisciplinary Complex for Sustainability in the University campus in Villarrica.

Fauna Australis research laboratory is well-established now as an authority in wildlife conservation and temperate rainforest ecology in Chile. Twelve years on, we keep our collaboration with WildCRU and many people have passed through from diverse UK Universities, as graduate students, postdocs, researchers or volunteers. New faces have joined the team, and others have left to develop their careers elsewhere, but the opportunity created by the Darwin Initiative to establish a solid base has been a significant catalyst without which none of this would have happened.

For more information on project 15-006, please click [here](#).



Camera trap training,
Credit: Fauna Australis



Magellanic penguin family,
Credit: Mike Bingham

Tourists protect penguins in Chile

Magellanic penguins (*Spheniscus magellanicus*) are found only in southern South America, with breeding populations in Chile, Argentina and the Falklands Islands. Population studies estimate that the world population of Magellanic penguins is around 1.5 million breeding pairs, with approximately 700,000 pairs in Chile, 700,000 pairs in Argentina and 130,000 pairs in the Falklands Islands. The Falkland Islands used to have over 1 million pairs, but the 90% decline in penguin numbers generated concern for the status of penguins in Chile and Argentina.

In 1999 the Darwin Initiative supported the establishment of a long-term penguin monitoring programme led by Mike Bingham on one of the largest and most important breeding sites in Chile, located on Magdalena Island in the Straits of Magellan.

“ Far from being a threat to the penguins, the penguins actually have higher breeding success around the tourist path than on parts of the island where the tourists do not visit

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During the last 20 years this programme which began with Darwin Initiative funding has since developed its own funding through a penguin adoption scheme in which people can adopt and choose a name for their penguin. The adoption programme has become so successful that following its establishment in 1999, it has been extended to cover penguin colonies at Contra Maestra Island and Punta Dungeness in Chile, and Cabo Virgenes in Argentina.

Through research funded under the programme it has discovered that Magellanic penguin populations in southern South America are healthy. These four combined sites have increased from 185,000 pairs in the year 2000, to 189,000 pairs in 2019, so the population in Chile and Argentina is healthy and stable, despite the ongoing decline in the Falkland Islands.

An interesting discovery on Magdalena Island is that the tourists visiting the island are actually providing protection to the penguins they come to see. Far from being a threat to the penguins, the penguins actually have higher breeding success around the tourist path than on parts of the island where the tourists do not visit.

The main predator of penguin chicks and eggs on Magdalena Island is the Chilean skua (*Stercorarius chilensis*), a very large predatory gull.



Penguins adapted to the presence of tourists, Credit: Mike Bingham

The skua is very shy and avoids human presence. The skuas therefore remain in the parts of the island not visited by tourists. This reduction in the abundance of skuas around the tourist path decreases predation and increases the breeding success of the penguins. The tourists help the penguins to raise more chicks. This is promising news for penguin tourism in other areas.

Penguins at all four sites in Chile and Argentina are protected from the commercial fishing industry by no-fishing zones.

Their food supply is therefore protected and penguins at these sites can find plenty of fish to feed their chicks. Penguin populations on the Falkland Islands continue to decline, and that situation is unlikely to change unless the Falkland Islands Government agrees to provide similar protection against commercial fishing.

For further information on project 10-007, please click [here](#).



Nest cavity filmed in Nothofagus forest Southern Chile, Credit: Fauna Australis

Newsletter Contacts

The Darwin Initiative Secretariat (Defra)

The Darwin Secretariat is based in Defra and includes Tim Pryce, Siriol Leach, Shaluki Perera and Scott Nelson.

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

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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

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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 £166 million to 1,169 projects in 159 countries.